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**Midwives' perceptions of and responses to the experience of perinatal trauma: a mixed
methods investigation**

Kayleigh S Sheen

**Thesis submitted to the University of Sheffield, Department of Psychology for the
degree of Doctor of Philosophy**

April 2014

ABSTRACT

This thesis investigates whether midwives perceive events experienced in the work context as traumatic, and considers potential predictors and implications. In addition, this investigation explores how responses can be best conceptualised at a theoretical level. It incorporates a postal survey with quantitative measures and an in-depth interview study of selected samples. Postal surveys were distributed to 2800 midwives randomly selected from the Royal College of Midwives' membership database (study 1). 464 (16%) were returned. 421 midwives had experienced a traumatic perinatal event and formed the final sample. A traumatic perinatal event was defined using the DSM-IV Criterion A for posttraumatic stress disorder. Symptoms of posttraumatic stress (PTS), burnout and worldview beliefs were assessed. Telephone interviews (study 2) were conducted with midwives from the postal survey (n= 36), selected for the severity of responses. Study 1 indicated that perception of an event as traumatic was determined by aspects intrinsic to the event (e.g., severe, unexpected) and factors relating to parents, colleagues, organisational context and personal salience. 33% of midwives reported current symptomatic responses commensurate with clinical PTS. PTS symptomatology was predicted by empathy and previous trauma exposure, and predicted the severity of burnout. Findings from study 2 indicated that the experience influenced midwives' personal and professional wellbeing. Midwives with high distress had a greater propensity to perceive all aspects of personal and professional life as negatively impacted. Making the very conservative assumption that all non-responders to the survey were unaffected, findings indicate that a minimum of 5% of practising midwives in the UK are likely to be experiencing symptoms of PTS following events experienced through their clinical practice. Maternity services need to acknowledge the potential impact of traumatic perinatal event exposure on midwives. Attention is required within pre and post registration education, and within organisations, to ensure accessibility to appropriate psychological care.

PUBLICATIONS AND CONFERENCE PROCEEDINGS

Publications

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GLOSSARY OF TERMS

AN	Antenatal Ward
APH	Antepartum Haemorrhage
BO	Burnout
CF	Compassion Fatigue
CS/ EmCS/ LSCS/ EmLSCS/	Caesarean section/ Emergency Caesarean Section/ Lower Segment Caesarean Section/ Emergency Lower Segment Caesarean Section
CTG	Cardiotocography
DIC	Disseminated Intravascular Coagulation
EFM	Electronic Fetal Monitoring
GA	General Anaesthetic
H	Heard an account of a traumatic perinatal event
HH	Midwives with high posttraumatic stress symptoms, high perceived impairment (interview study)
IUD	Intrauterine Death
IUFD	Intrauterine Fetal Death
IUFR	Intrauterine Fetal Resuscitation
LL	Midwives with low posttraumatic stress symptoms, low perceived impairment (interview study)
LW	Labour Ward
MD	Medical Doctor
MEC	Meconium
MW	Midwife
NICU	Neonatal Intensive Care Unit
NNU	Neonatal Unit
PN	Postnatal Ward
PPH	Postpartum Haemorrhage
PTSD	Posttraumatic stress disorder
SB	Stillbirth
SCBU	Special Care Baby UNIT
SROM	Spontaneous Rupture of Membranes
STS	Secondary Traumatic Stress
VBAC	Vaginal Birth After Caesarean
W	Witnessed traumatic perinatal events
VT	Vicarious traumatisatio

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CHAPTER 1. Introduction

A primary aim of this thesis is to investigate the experience and potential impact of indirect exposure to traumatic perinatal events on midwives. Childbirth is predominantly perceived as a normal, positive occurrence within the developed world; however, adverse incidents can occur where there is a high level of risk for the mother or her child. During instances such as this, the experience can be perceived to be traumatic. Through providing care to women, there is potential for midwives to indirectly experience events occurring during labour, delivery or shortly afterwards that they perceive to be traumatic. There has been little empirical investigation into midwives' experiences of trauma within this context, and therefore this thesis aims to investigate the nature of events perceived as traumatic by midwives, the perceived and symptomatic impact of event exposure, and the consequence these have for personal and professional wellbeing.

A secondary aim of this thesis will be to explore the different conceptualised responses to traumatic event exposure. There are several conceptualised responses that can occur following indirect exposure to trauma. These include posttraumatic stress disorder (PTSD; APA, 2000), secondary traumatic stress (STS; Figley, 1995), compassion fatigue (CF; Figley, 1995) and vicarious traumatisation (VT, McCann & Pearlman, 1990). However, there is confusion and considerable overlap between various conceptualisations of responses to traumatic events. By examining different elements of these responses, the different theoretical propositions of each response can be investigated, symptomatic manifestations disaggregated, and conclusions drawn over the requirement for multiple conceptualised responses.

This chapter will begin by outlining the theoretical responses to trauma. Differences between each concept will be discussed, and the case for considering primarily PTSD and VT presented. The latter half of the chapter will discuss current understanding regarding the potential impact of indirect trauma exposure on health professionals, including (but not limited to) midwives. Through the synthesis of findings from studies on indirect trauma exposure in other health professional groups, key responses and associated factors are identified and discussed in relation to their salience for midwives. The chapter will conclude with a presentation for the rationale that a) there is a potential for midwives to encounter traumatic perinatal events through their professional capacity and that b) there is a potential for midwives to develop symptomatic responses in response.

1. Section 1: Theoretical responses to indirect trauma

Events encountered through direct and indirect means can both fulfil criteria for trauma, and can potentially elicit a psychological response (American Psychological Association, APA, 2000). Direct exposure encompasses a degree of threat occurring directly to the individual; they fear for their own life. Indirect exposure to an event can include witnessing or listening to an account of an event from an individual who was directly affected, and where the degree of threat was affecting a “family member or other close associate” (APA, 2000, p. 463). Indirect exposure to trauma can theoretically elicit a number of adverse psychological responses, including posttraumatic stress disorder (PTSD; APA, 2000) and vicarious traumatisation (VT, McCann & Pearlman, 1990). Additional conceptualisations include secondary traumatic stress (STS, Figley, 1995) and compassion fatigue (CF, Stamm, 2010). An additional response often implicated alongside responses to indirect trauma is burnout (Maslach, Schaufeli & Leiter, 2001). These conceptual responses are reviewed in the following sections.

1.1. Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) is an anxiety disorder classified within the Diagnostic and Statistical Manual of Mental Disorders (DSM-TR-IV, APA, 2000). According to the DSM-IV-TR, PTSD can develop after experiencing, witnessing or “being confronted with” a traumatic event (APA, 2000, p. 467). An event is considered traumatic if it involves an element of perceived or actual risk to the life of either ‘a significant other’ or the self, and where it is accompanied with an immediate response of “intense fear, helplessness or horror” (APA, 2000, p. 467).

PTSD is characterised by three symptom clusters of intrusion, avoidance and increased arousal. Intrusion symptoms involve the repeated re-living of the traumatic event in the form of intrusive and distressing recollections (e.g., thoughts), distressing dreams and nightmares, and feeling as if the traumatic event was recurring through the experience of hallucinations, flashbacks or illusions. Avoidant symptomatology involves the persistent avoidance of people, places or thoughts associated with the event. It can also involve numbing, detachment or dissociative responses. Increased arousal symptomatology can involve difficulty sleeping, concentrating and an exaggerated startle response. For a full diagnosis, an individual needs to experience at least one type of intrusive symptom, at least three types of avoidant symptoms, and at least two types of increased arousal symptoms of for at least one month, and for these to be causing severe impairment to daily living. At this point

symptoms are no longer considered to represent a normal adjustment to trauma, and indicate a potentially enduring stress response.

There are several theoretical explanations for the development and maintenance of PTSD. The next section will discuss five dominant theories, including the stress-response theory (Horowitz, 1986), the shattered assumptions theory (Janoff-Bulman, 1992), the dual representation theory (Brewin, Dalgleish & Joseph, 1996), emotion processing models (Foa, Steketee & Rothbaum, 1989) and finally the cognitive theory by Ehlers and Clark (2000).

The stress-response theory (Horowitz, 1986) posits that there is an unconscious and fundamental “completion urge” to process event information. This completion urge interacts with a force acting to protect the individual from ‘harm,’ which is the information held about the traumatic event. Processing of the event information follows a pattern of initial distress (at being unable to process information at once) and intrusions of the event forcing their way into consciousness. These are then repressed via the protective force. The oscillation between the latter two forces enables information to be gradually processed (Dalgleish, 2004). Poor defence reactions prevents the processing of event information, which can lead to chronic PTSD (Dalgleish, 2004). The stress-response theory incorporates elements of information processing and cognitive schema alongside psychodynamic forces. It provides an understanding of PTSD in terms of long-term reactions (Brewin & Holmes, 2003) as it provides explanations for both the cognitive and physiological responses that occur after a traumatic event. It can also account for the duration of responses corresponding to the time taken to process information. Whilst this theory is not generally used as a primary explanation for PTSD, elements of this theory are seen in later models.

The Shattered Assumptions Theory (Janoff-Bulman, 1992) states that there are three main assumptions held by an individual that are vulnerable to disruption following trauma. These are that the world is benevolent, the world is meaningful, and the self is worthy. Beliefs relating to the benevolence of the world correspond to a beliefs about the world as a good place, that bad occurrences are relatively rare, and that others are mainly caring, helpful and kind (Janoff-Bulman, 1989). Meaningfulness of the world relates mainly to beliefs about outcome distribution. That is, how bad and good outcomes (after events) are distributed to others. Beliefs about justice, control, and randomness contribute to this assumption. Beliefs about self-worth are in some ways parallel to beliefs about the meaningfulness of the world, but primarily relate to an individual’s perception about their own outcome distribution. Beliefs relate to an individual’s perception of their self-worth, and the extent to which they can control their own outcome distribution through their own behaviour. Beliefs about luck,

and the extent to which this protects them from bad outcomes, are also included in this assumption.

These assumptions form the most basic and fundamental way in which the world is viewed, and information about experiences are processed. However encountering a traumatic event directly contradicts these beliefs, thus causing them to ‘shatter’. It is the shattering of these beliefs that lead to the development of PTS symptomatology. This theory is supported by studies demonstrating an increase in negative worldview beliefs reported by individuals with PTS in comparison to those without PTS following exposure to trauma (Park et al., 2012). This theory would predict that individuals who have particularly positive worldview beliefs prior to trauma exposure would be at greater risk for PTS responses, and individuals with prior trauma exposure would already have negative, ‘shattered’ beliefs and be at a lesser risk of PTS symptoms (Brewin & Holmes, 2003). However, studies have cited an increased risk for PTS responses in individuals with prior trauma exposure (Ozer et al., 2003). The shattered assumptions theory focuses on the role of worldview beliefs and how these can shape the processing and understanding of a traumatic occurrence. However, caveats such as the one just described highlight a limitation in the explanatory power of the theory in accounting for the role of some established predictors.

The dual representation theory (Brewin et al., 1996) postulates the cause of symptoms as a result of memory representations, similar to Foa’s (1989) theory. According to this, memories can be formed and are represented in two ways. Verbally accessible memories (VAM’s) are consciously formed and can be retrieved at will. Situationally accessible memories (SAM’s) are unconsciously formed and cannot be recalled voluntarily. Due to the unconscious nature of the SAM’s, they are often more sensually vivid as they do not have the same attentional processing restrictions as the VAM’s. According to this theory, PTSD is the manifestation of event information being ‘stuck’ in the SAM system, and it not being adequately processed into the VAM system. The two levels incorporate aspects of Foa’s fear networks (the SAM’s) and Horowitz’s model (the VAM’s) (Brewin & Holmes, 2003). By having unconscious and conscious forms of memory representing the event, the model can account for a wider range of occurrences. It also distinguishes qualitative differences between consciously formed memories and the more vivid flashbacks that occur involuntarily, and explains their difference. However, the way in which the VAMs and SAMs are represented in memory is not as specified as other models, such as Foa et al. (1989).

The cognitive model of Ehlers and Clark (2000) posits that negative appraisals of the event and its sequelae result in distortions and bias in the formation of autobiographical memories. The theory aims to account for the maintenance of PTSD, and the nature of the disorder as a response to ‘current threat’ based on a previous event. Poorly contextualised memories of the event and negative appraisals of such prevent the individual interpreting it as time-limited (Brewin & Holmes, 2003; Ehlers & Clark, 2000). As a result, fear of an impending threat is based on the occurrence of a previous traumatic event. Similar to the DRT (Brewin, Dalgleish & Joseph, 1996), Ehlers and Clark acknowledge differences in the way memories are represented, in that memories can differ on the basis of data driven and conceptual processing. These can be interpreted as similar to VAM’s and SAM’s respectively. Many environmental cues are formed in order to identify a potential threat to the individual due to a “reduced perceptual threshold for trauma related stimuli” (Brewin & Holmes, 2003, p. 362). The cognitive model also outlines certain coping mechanisms that would maintain symptoms, such as avoidance of trauma related stimuli.

Emotion processing models provide a different perspective on the causes of PTSD, which primarily focus on the role of the trauma event itself rather than additional social or personal factors. The occurrence of PTSD is dependent on the way in which the trauma memory is processed and represented in memory. It is suggested that traumatic memories are represented as a series of interconnected nodes (Lang, 1979). Information on the feared object, the personal reactions and how these two may link are represented in their three categories. Cognitive and affective responses are represented together to aid escape in future situations (Brewin & Holmes, 2003). Foa et al. (1989) claimed that these networks that represent information processed at the time of event are more prominent than existing (related) as they contradict existing beliefs of safety. As a result, when objects cue the event-related nodes, the fear related nodes are evoked more strongly, and a fear response is elicited. To level out the strength of the interconnected nodes, information from the trauma event needs to be contextualized within the overall system. This can be achieved via exposure to feared stimuli.

Models of PTSD explain reactions to trauma in different ways but using similar mechanisms. All three models acknowledge the role of schema, memory and the integration of trauma event information into memory. The importance of putting memories into context is uniform across the models, but for different reasons (Dalgleish, 2004). The role of beliefs, appraisals and schema are all inherent within the development (Foa et al., 1989) and maintenance (Ehlers & Clark, 2000) of PTS responses.

Evidence of PTSD following indirect exposure to trauma

Studies have reported evidence of PTS symptomatology in professionals who witness trauma occurring to recipients of care. Clohessy and Ehlers (1999) sampled ambulance workers who rated a series of events that they would routinely attend to as part of their professional lives. A prevalence rate of 21% for PTS symptoms was found within the ambulance workers. Laposa and Alden (2003) reported a prevalence rate of 12% within their sample of emergency service workers for full PTSD criteria. Both studies demonstrate a prevalence of posttraumatic stress symptoms in professionals who are exposed to trauma through their profession. Laposa and Alden (2003) tested participants who worked in various roles in the emergency department. Some were administrative staff and others were nurses from the emergency room. Despite participants possessing different levels of responsibility within traumatic events, there was no significant difference in the severity of PTSD symptoms. However, within both studies there were some participants who had directly experienced injury throughout their role, which makes it difficult to disaggregate indirect from direct exposure.

Studies have also reported evidence of PTS symptomatology in individuals who learn of an event after it has happened. Suvak et al. (2008) identified symptoms of PTS in individuals who were exposed to reports of September 11 through the media. An alternative study found a prevalence rate of 1.2% for full PTSD symptomatology in their sample of 84 mothers indirectly exposed to details of September 11 through media coverage (Otto et al., 2007). These studies demonstrate the potential for listening to accounts of trauma to elicit symptoms of PTS. Participants were never directly exposed to the events of September 11th, but were demonstrating symptoms of distress similar to PTSD. However symptoms were generally sub threshold and only a small proportion of those sampled experienced PTS at levels indicative of clinical relevance.

Krans, Näring, Holmes and Becker (2010) investigated the potential for indirect exposure to trauma accounts to elicit symptoms of intrusive imagery. A sample of predominantly students ($n= 86$) listened to a verbal report of a road traffic accident, staged at the time of the event. Participants were subsequently found to experience intrusive imagery from the verbal account of the accident. However, the extent to which this is indicative of PTS following an entirely verbal account alone is limited. Participants purposefully constructed visual imagery of the event as they listened to the audio account. The audio account also included background noise, which could have facilitated a mental representation of the event. Therefore, although this study identifies the potential for an account of trauma to elicit PTS-

like symptomatology, it does not entirely represent the nature of exposure to traumatic accounts that health professionals are likely to encounter.

1.2. Vicarious Traumatization

Vicarious traumatization (VT) was originally identified in therapists working with survivors of traumatic events. McCann and Pearlman (1990) claimed that repeated exposure to accounts of “horrific events, bearing witness to people’s cruelty to one another, and witnessing and participating in traumatic re-enactments” result in enduring cognitive changes (Pearlman & Mac Ian, 1995, p. 558). Changes are manifested as disruptions to frame of reference, identity, worldview, spirituality, psychological needs, and the beliefs of self and others (Pearlman & Saakvitne, 1995). It was also hypothesized that VT encompasses symptoms similar to those seen in PTSD such as intrusive thoughts, avoidance strategies and a change in arousal states (McCann & Pearlman, 1990) as well as disruptions in memory. Symptoms similar to PTS are acknowledged, but cognitive change is the fundamental focal point in the theory of vicarious traumatization.

The constructivist self-development theory (CSDT) provides a framework to understand the different processes involved in VT (McCann & Pearlman, 1990). Information being received about a traumatic event clashes with the therapist’s schema as they try to process information that conflicts with what they already believe. The severity of this response is dependent on the degree of difference between original schema and the new information (McCann & Pearlman, 1990). VT is the result of the interaction between incoming trauma information, the therapist’s original schema and the psychological process of adaptation.

Evidence for VT following indirect trauma

Reviews conducted on the empirical evidence for VT have identified a general inconsistency in findings, drawn from a relatively limited body of research (Sabin-Farrell & Turpin, 2003; Sinclair & Hamill, 2007). Sabin-Farrell and Turpin reported that qualitative studies provided greater support for cognitive change. For example, Van Minnen and Keijers (2000) investigated the impact of trauma-related work on therapist’s cognitive beliefs. Using quantitative assessment, there was no difference in cognitive beliefs reported by therapists in either trauma or non-trauma-related work. However, qualitative investigation identified greater evidence of cognitive disruption in therapists engaged in trauma- related work.

Steed and Downing (1998) conducted semi-structured interviews on a sample of 12 female sexual assault therapists. Over half of the participants described experiencing intrusive imagery. Pearlman and Mac Ian (1995) found that a personal history of trauma predicted the

frequency of intrusive imagery in therapists. Ben-Porat and Itzhaky (2009) assessed reactions to working with traumatized clients in family violence therapists. Qualitative assessment demonstrated that family violence therapists reported experiencing changes in their perceptions of the world and humanity and symptoms of PTS. Iliffe and Steed (2000) conducted interviews with 18 counsellors who work with both victims and perpetrators of domestic violence. The themes arising were analogous to “many of the phenomena of VT” (Sinclair & Hamill, 2009, p. 353). These studies provide qualitative evidence the symptoms of PTS, especially that of intrusive imagery, occurring as VT.

McCann and Pearlman (1990) posit that therapists can incorporate the accounts of their client’s event into their imagery system of memory and that these images can be unconsciously recalled via learned stimulus-response associations. The authors based this assumption on anecdotal evidence provided by therapists. If intrusive visual imagery does occur as part of VT, these images would be entirely constructed by the therapist and based on a verbal account rather than an actual experience. It is unclear as to whether intrusive visual memory constructed in this way would possess the same level of intensity as experienced in PTSD. Adams and Riggs (2008) assessed vicarious trauma in therapist trainees, measured in terms of arousal, intrusive experiences, avoidance strategies, dissociation and impaired self-reference measures. They found that 8-15% of the sample reached the clinical cut off score on every measure of PTS (Adams & Riggs, 2003).

1.3. Alternative terminology and associated responses to indirect trauma

Secondary Traumatic Stress

Secondary traumatic stress (STS) is conceptualised as the stress “resulting from helping or wanting to help a traumatised or suffering person” (Figley, 1995, p. 7). Therefore it specifically occurs after encountering an event involving a ‘significant other’ who has experienced a traumatic event (Figley, 1995). Similar to PTSD, secondary traumatic stress is characterised by symptoms of intrusion, avoidance and arousal. Unlike PTSD, intrusive recollections can relate to either the person who has experienced the event, or the person hearing about it (Figley, 1995). Initial reaction to the traumatic account, the required symptom duration, and level of associated impairment are not specified for STS (Elwood, Mott, Lohr & Galovski, 2011). However, STS can theoretically reduce the capacity of an individual to provide sensitive care, or adversely impact on the organisational climate through the increase of absenteeism and staff turnover (Figley, 1995).

Compassion fatigue

Compassion fatigue (CF) was originally used to refer to the general debilitating effects of providing care and specifically related to those engaged in caring professions (Joinson, 1992). CF has since been adopted as an “appropriate substitute” for the term STS (Figley, 1995, p. 9). Presence of CF is inferred from the experience of intrusive, avoidant and increased arousal symptomatology alongside responses of burnout (see section 2), in order to identify the ‘potential risk’ of an individual experiencing CF. CF can theoretically impact upon the individual, their relationships with others and the care they provide in addition to increasing other responses of depression or increased substance abuse (Stamm, 2010).

Burnout

Burnout is defined as the response to psychological strain caused by interpersonal relationships within the workplace (Maslach, Schaufeli & Leiter, 2001). Burnout is not specific to helping professions or exposure to traumatic events; however, it is often found to occur alongside additional responses to trauma and can be difficult to differentiate from other, more trauma-focused, responses. It is characterised by symptoms of emotional exhaustion, depersonalisation and a reduced level of professional accomplishment. Tension from client interaction can result in emotional exhaustion. Individuals react to emotional exhaustion by distancing themselves from their clients and work via a process of depersonalisation. Depersonalisation results in the individual failing to recognise the clients they attend to as individuals (Maslach et al., 2001). This prevents the same level of interpersonal care from being provided, and results in a reduction in perceptions of personal accomplishment at work.

Burnout has consequences for both the wellbeing of the individual and the general organisational climate. Consequences of burnout include an increased turnover of staff, increased absenteeism and lower productivity and quality of work (Maslach et al., 2001). It has also been claimed that burnout responses are contagious between members of staff, as feelings of dissatisfaction are transmitted via interpersonal relationships (Maslach et al., 2001). Burnout also has the potential to affect the personal life of the employee by interfering with personal relationships (Maslach et al., 2001). Potential predictors and protective factors for burnout have been identified. A low level of experience has been correlated with higher levels of burnout (Ackerley et al., 1988). Distinctions have also been drawn between institutional work and private practice, with the former being at greater risk to burnout than the latter (Gaal, 2010). A high level of social support and relationships with other colleagues at work provides a protective element to the onset of burnout (Maslach et al., 2001).

Table 1.1 A framework for considering the differences between hypothesised traumatic stress responses for indirect trauma.

Traumatic stress response	Level of exposure	Onset	Symptomatology
Posttraumatic Stress Disorder (APA, 2000)	Experience, witness, or hear about a traumatic event	Can occur immediately after 1 event	Intrusion, avoidance, arousal
Secondary Traumatic Stress (Figley, 1995)	Hear about an event from a traumatised individual	Can occur immediately after 1 event	Intrusion, avoidance, arousal
Compassion Fatigue (Stamm, 2010)	Hear about an event from a traumatised individual	Can occur immediately after 1 event	Intrusion, avoidance, and arousal
Vicarious Traumatization (McCann & Pearlman, 1990)	Hear about multiple events from many different individuals.	Repeated exposure to multiple events	Cognitive disruption. Intrusion, avoidance, arousal.

1.4. Differentiation of conceptual responses to indirect trauma

A comparison of requirements for exposure, onset and associated symptomatology between theories is presented in Table 1.1. There is confusion and considerable overlap between terms used to describe responses to indirect trauma. PTSD can occur after direct and indirect trauma exposure, whereas STS, CF and VT occur after indirect exposure. PTSD and STS can develop immediately following event exposure whereas VT occurs gradually after repeated exposure as it is a cumulative response. PTSD, CF and STS are characterized by emotional or behavioural responses. VT is primarily associated with cognitive change; however simultaneous, and secondary, symptoms of PTS are acknowledged. Table 1.2 presents the associated event exposure, processing and symptomatic response defined within each theory. The term traumatic stress will be used to refer to symptomatic responses to indirect trauma, including the emotional and behavioural responses of intrusions, avoidance and arousal in addition to the cognitive changes associated within the theory of VT.

Consideration of PTS and VT provide a method of investigating both the emotional and behavioural symptoms of PTS, STS and CF, alongside the cognitive changes associated within VT. It also enables consideration of exposure to traumatic events through witnessing them or listening to an account of an event and perceiving it to be traumatic. However, there is further overlap in the conceptualisation of PTS and VT. The next sections provide a

detailed consideration of the theoretical requirements of events (eliciting a symptomatic response), associated processing, and resulting symptomatology between each concept of PTSD and VT.

Events

PTS occurs in response to an event involving an actual or perceived threat to the life of the self or a significant other (APA, 2000). Specific delineation over the attributes or significance of the other person is not clear (Suvak et al., 2008). Vicarious traumatisation is specifically conceptualised for individuals indirectly exposed to traumatic accounts from recipients of care (Pearlman & Mac Ian, 1995). Therefore whilst the criterion for PTS acknowledges the potential for exposure to trauma through recipients of care, only the theory of VT specifically accounts for this mode of exposure.

Furthermore, the criterion for PTS primarily accounts to one event exposure, rather than repeated exposure over time (Seides, 2010). The theory for VT specifically accounts for repeated exposure to multiple accounts of trauma (e.g., Brady et al., 1999). Exposure to trauma within a healthcare context could involve multiple and repeated encounters with trauma, rather than one exclusive encounter. Therefore, it may be that the criterion for VT is more appropriate for consideration for midwives encountering trauma than the criterion for PTS.

Processing

There are two central processes that are implicated in the development and maintenance of responses associated with PTS and VT. These relate to memory formation and processing, and the role of cognitive schema and appraisals.

The role of memories in processing traumatic events is central to many of the theories of PTSD, and is often considered an aspect that distinguishes PTSD from other related disorders (Brewin & Holmes, 2003). Working memory ability has also been associated as a predictor of PTSD; Brewin and Smart (2005) found that working memory capacity was related to the prevention of intrusive imagery in a thought suppression task. A lack of conceptual processing can theoretically result in disfragmented memories that are not elaborated or assimilated into wider autobiographical memories, resulting in an acute sense of 'current' threat (Ehlers & Clark, 2000). Increased working memory function could theoretically increase the efficiency of processing traumatic information.

Memory is also an important feature in the theory of VT. It is hypothesised that the traumatic accounts of clients become incorporated into the imagery system of the therapists to such an extent that they are recalled as personal memories. This alteration to the imagery system can also lead to “powerful affective states” (McCann & Pearlman, 1990, p143). If not processed efficiently, these responses can result in the dissociative symptoms also described in PTSD. VT mainly affects professionals, and therefore the role of the working environment must also be taken into account alongside exposure to trauma. It is hypothesised that features of the working environment interact with the personal characteristics of the caregiver to determine the severity of VT (Pearlman & Saakvitne, 1995).

Cognitive schemas and beliefs are hypothesised to predict or protect individuals from the development of PTS (e.g., Ehlers & Clark, 2000; Janoff-Bulman, 1989). Appraisals formed about the nature of the traumatic event, its cause and the role of the individual in causing the event can all contribute to the development of PTS (Brewin & Holmes, 2003). Furthermore, appraisals after the event and of responses experienced can contribute to the maintenance of PTS. For example, negative interpretations of intrusive memories have been associated with increased symptom severity and maintenance of PTSD (Clohessy & Ehlers, 1999; Laposa & Alden, 2003). The DRT (Brewin et al., 1996) accounts for changes in both beliefs and emotional reactions within PTS, similar to the effects of vicarious traumatisation.

Schemas and beliefs are also of fundamental importance in vicarious traumatisation. Vicarious traumatisation occurs through the empathetic engagement between a professional and the recipient of care. Awareness and the processing of traumatic information recounted by the recipient of care affects the fundamental needs areas of dependency, safety, power, independence, esteem and intimacy (Pearlman & Saakvitne, 1996). The therapist’s worldview and frame of reference is also negatively impacted (McCann & Pearlman, 1990). The extent of impact is dependent on the salience of these schemata to the individual (McCann & Pearlman, 1990).

Symptoms

PTS is indicated by the presence of three symptom clusters. The individual reexperiences the event via intrusive thoughts and imagery, flashbacks, nightmares, and distressing psychological or physical responses to stimuli associated with the event. These symptoms are responded to using a variety of dissociative and avoidance strategies that aim to protect the individual from distress. There are also responses of increased arousal such as difficulty

sleeping, increased startle response and problems concentrating. Presence of PTS is indicated by these symptoms occurring for a specific duration (within six weeks of trauma exposure and a duration of 6 months), alongside evidence of severe impairment to daily functioning. The majority of cases naturally remiss after 6 months (e.g., Ayers & Pickering, 2001) however some individuals develop a chronic form of PTSD that lasts longer.

VT hypothetically involves disruption to the individual's frame of reference, identity, worldview, spirituality, psychological needs, and beliefs held about the self and other people (Pearlman & Saakvitne, 1995). There is also acknowledgement of PTS symptomatology such as "intrusive thoughts and images, painful emotional reactions" (McCann & Pearlman, 1990, p144), that occur as the therapist assimilates their client's accounts into memory. However, a primary feature of VT is the gradual and cumulative alteration to schemata.

Table 1.2 The role of event exposure, processing and symptomatic response within posttraumatic stress (PTS) and vicarious traumatisation (VT)

	PTS	VT
Events	Direct or indirect exposure to one event involving a perceived or actual threat to life (for the self or a 'significant other').	Repeated exposure to verbal accounts of traumatic events that have occurred to somebody else, namely an individual in receipt of care.
Processing	Memory formation, cognitive schemata and appraisal of the event and responses.	Memory formation, cognitive schemata and appraisal of the event and responses.
Symptoms	Reexperiencing, avoidance and numbing, increased arousal. Symptoms occurring within 6 weeks of event exposure. At least one month's duration Evidence of impairment to daily functioning.	Change in cognitive schema corresponding to the following areas: safety, trust/ dependence, intimacy, control and esteem. Secondary symptoms of reexperiencing and avoidance strategies.

To conclude, there is potential for indirect exposure to trauma to elicit symptomatic responses that are both distressing and potentially enduring. Theories of PTSD provide a framework for the development and maintenance of the emotional, cognitive and behavioural responses that could occur following indirect exposure to trauma in midwives. The theory of VT postulates that listening to traumatic material can elicit enduring cognitive changes. As the nature of exposure to trauma is not yet known for midwives, this thesis will use the theories of PTS and VT as guiding frameworks for investigating the impact of midwives' experiences of traumatic perinatal events.

2. Section 2: An integrative review of literature of responses to indirect trauma in health professionals and issues of salience for the midwifery profession

2.1. Introduction

Whilst childbirth is generally considered to be a positive occurrence in the developed world, adverse situations can occur where the mother or her child is considered to be at risk. Within situations like this, midwives may indirectly encounter events that they could perceive as traumatic. Midwives within the UK are considered lead professionals in the provision of low-risk maternity care (Department of Health, DOH, 2010). The role of the midwife encompasses the promotion of normal birth, support for mothers, the detection of complication in the mother or her child and the facilitation of access to additional medical or assistance within emergency care situations (Nursing and Midwifery Council, NMC, 2009). Through the variety of roles undertaken, it follows that there is potential for midwives to encounter events that they perceive to be traumatic whilst providing care to mothers during labour and birth.

A traumatic perinatal event is defined as an event occurring during labour, delivery or shortly afterwards, where there is a perceived or an actual threat to the mother or her child's life (Beck, 2004; APA, 2000) and where this threat is appraised by the individual with a sense of fear, helplessness or horror. Midwives could encounter traumatic perinatal events whilst providing care to women during labour and birth, or by listening to an account of a traumatic event from a woman in their care postnatally or at a subsequent pregnancy.

Despite potential for midwives to encounter traumatic perinatal events whilst providing care to women, there has been little empirical investigation into midwives' experiences or responses to date (Leinweber & Rowe, 2010). Zeidenstein (1995) used the concept of 'midwife grief' to refer to anecdotal reports of midwives' experiencing nightmares and leaving the profession following distressing experiences at work. Responses such as intrusive imagery, flashbacks and avoidant behaviour have been described in small studies of midwives providing care during maternal death (Mander, 2001) and after carrying out antenatal assessments for domestic violence (Mollart et al., 2009).

Midwives' professional practice certainly has potential for indirect traumatic experiences, and responses of PTS or VT could both theoretically occur. However, the nature and potential significance of responses remains largely unexplored. There is a need to consider findings from a wider literature, by considering the impact of indirect trauma exposure in other health professional groups. Other health professional groups potentially witness or

learn about traumatic events whilst working within a capacity of care, and therefore findings from these groups provide a basis of comparison for midwives in terms of symptomatic structure, prevalence and associated factors. By synthesising findings from other groups, issues of potential salience (e.g., predictors or vulnerability factors) can also be identified. Therefore a comprehensive review of evidence from other health professionals, including (but not limited to) maternity health professionals, who indirectly experienced trauma through the capacity of their work was conducted.

2.2. Method

2.2.1. Search Strategy

An integrative review design was used. Integrative reviews are suitable for emerging topics (Torraco, 2005) and studies with diverse methodologies (Whittemore & Knafl, 2005), which enables examination of findings from both quantitative and qualitative research. A literature search was conducted to identify articles published in English between 1980 and November 2012. PsychInfo, Medline, PsychArticles, Web of Knowledge, CINAHL, MIDIRS and Scopus databases were consulted to include psychology, nursing, medical, midwifery and multidisciplinary areas. Search terms were: vicarious traumatisation, vicarious traumatization, secondary traumatic stress, compassion fatigue, and posttraumatic stress. These were used alongside secondary terms of burnout, indirect exposure, trauma, symptoms, health worker, professional, and workers. Each conceptual response to trauma (PTS, STS, CF, and VT) was considered within this review due to the overlap in resulting symptomatology. Reference lists were examined for relevant papers. The timeframe for the search was theoretically driven by the introduction of PTSD in the DSM III (APA, 1980).

2.2.2. Inclusion and exclusion criteria

Papers published in English, with quantitative or qualitative exploration of responses to traumatic events following indirect exposure were included. The term ‘indirect exposure’ included witnessing or learning of an event from the recipient of care. Studies with qualified healthcare professionals, engaged in direct care, reporting a professional experience of indirect trauma were also included. Papers were excluded if personnel included in the study were not healthcare providers or if they worked in a voluntary capacity. Papers where professionals were directly affected by an event were excluded for review as this does not constitute indirect exposure. Similarly, papers where professionals were personally related to recipients of their care were excluded. Those focusing on the effects of disaster events were excluded, as professionals working during or following disasters could experience a degree of direct exposure. Professional groups without the potential to both witness and listen to trauma were excluded (e.g., therapists, counsellors, psychologists).

2.2.3. Quality Appraisal

There is currently “no gold standard” for determining quality in reviews with both quantitative and qualitative research (Whittemore & Knafl, 2005, p. 49); however, all papers were systematically considered in terms of their methodological strengths and weaknesses. No study was excluded for methodological limitations; however, specific issues are commented on throughout the review and taken into consideration when forming inferences.

2.3. Findings

An initial search, filtering for date and language, identified 816 papers (after removing duplicate items). Six papers were retrieved from reference lists. After applying exclusion criteria, 42 papers remained. This included two conference proceedings papers that provided sufficient information to ensure fulfilment of the inclusion criteria. Findings are organised into three sections; the first section reports symptomatic findings identified in quantitative and qualitative papers. A second section explores factors identified in both the qualitative and quantitative literature as associated with traumatic stress; empathy, work-related stress and the extent of professional experience. These aspects are then discussed in the context of the midwifery profession in the third section. Figure 1.1 displays the process of screening and selection of papers for synthesis.

The majority of studies included in the review were descriptive studies investigating the prevalence of traumatic stress responses in healthcare professionals. Only one study included assessment of a supportive intervention to reduce traumatic stress (Wallbank, 2010). This study, conducted with midwives, obstetricians and gynaecologists (total sample $n=30$) reported findings indicating the efficacy of additional clinical supervision, provided by a clinical psychologist, in reducing symptoms of PTS and CF in participants. Further discussion of this study is provided on page 23.

2.3.1. The measurement and conceptualisation of traumatic stress

Details of qualitative and quantitative papers included in the review are presented in Tables 1.3 and 1.4. There was good homogeneity in measurement for each response framework, which aids comparison of findings between studies and professional groups. CF was mainly measured using the Professional Quality of Life Scale (ProQOL, Stamm, 2000), which measures burnout, intrusion, avoidance, and arousal symptoms. A predominant measure of PTSD was the Impact of Event scale (IES, IES-R, Horowitz et al., 1979; Weiss & Marmar, 1997). The IES measures symptoms of intrusion and avoidance, and the IES-R also measures arousal symptoms. Two studies used the Secondary Traumatic Stress Scale (STSS, Bride et al., 2004), also a measure of intrusion, avoidance, and arousal. There was no

quantitative measurement of cognitive belief changes associated with VT. Qualitative studies mainly explored responses conceptualised as CF ($n=7$). Very few studies specifically investigated PTSD ($n=2$) or STS ($n=2$). No study considered VT. Therefore studies identified within this review primarily focused on responses of intrusion, avoidance and arousal symptomatology (regardless of the specific conceptualisation used), with no explicit investigation of cognitive change.

Figure 1.1 PRISMA flow diagram showing the screening and selection of articles for review

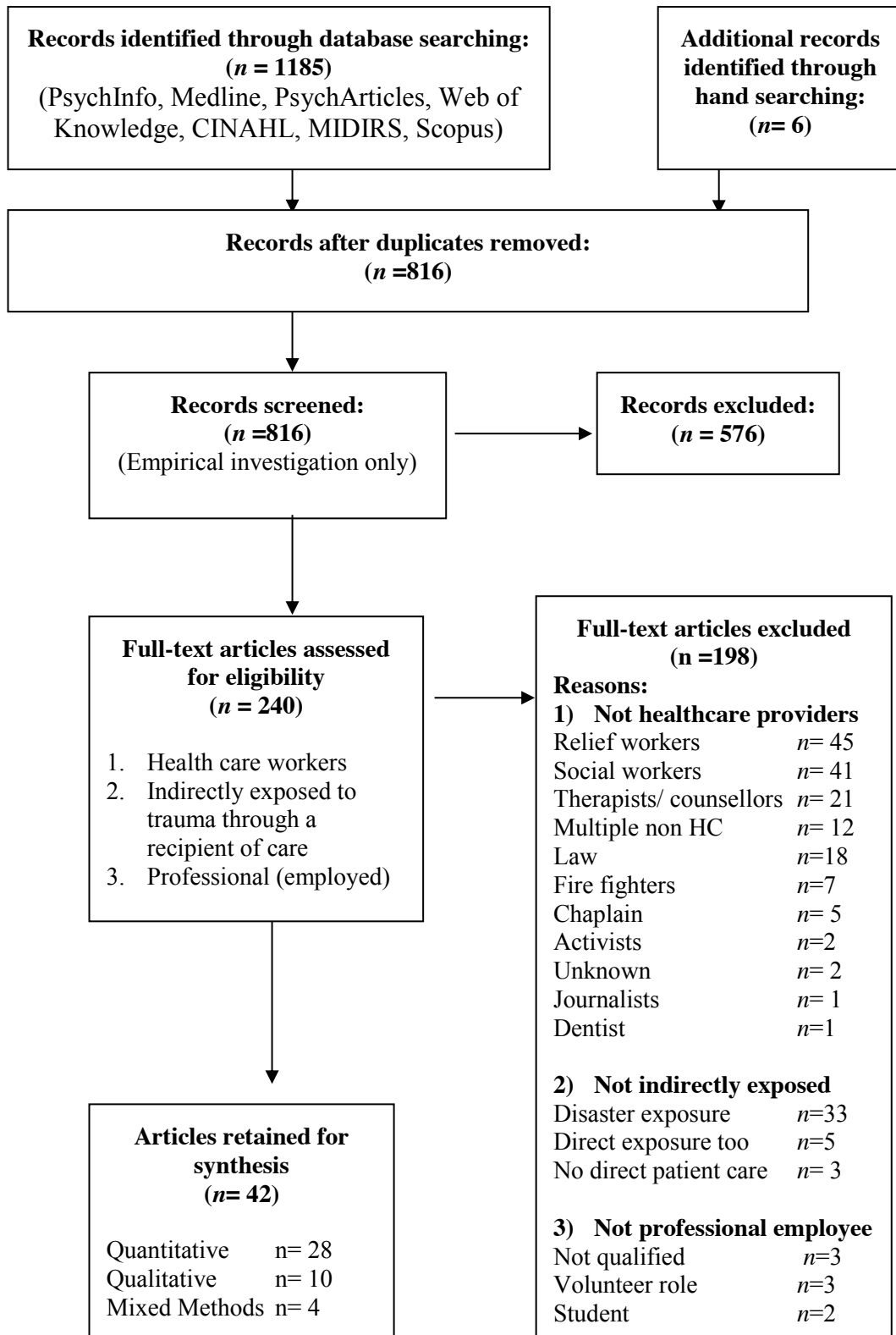


Table 1.3 Details of quantitative papers included in the review

Author and Country	Profession (n). Speciality	Focus (measure)	Main findings
Abendroth and Flannery (2006) USA	Hospice Nurses (n=216). Various	CF (ProQOL-III)	26% (n= 57) high-risk CF, 52% (n=113) moderate risk CF. Trauma, anxiety, life demands, empathy predicted CF.
Alexander and Klein (2001) Scotland	Ambulance Personnel (n=110).	PTSD (IES, MBI)	30% (n=27) had high level PTS symptoms, 30% (n= 27) moderate PTS. n=8 experienced symptoms ≥1 month.
Beck and Gable (2012)* USA	Nurses (n=464). Labour and Delivery	STS (STSS)	35% (n=160) reported moderate-high levels of STS. 26% (n=120) met DSM-IV-TR symptom criteria for PTS.
Burtson and Stichler (2010) USA	Nurses (n=126). Emergency	CF (ProQOL)	Higher than average CF score. An aspect of ‘nurse caring’ (relating to knowledge and skill) sig. associated to CF.
Chan and Huak (2004) Singapore	Doctors, nurses (n=491). Hospital	PTSD (PCL-C)	Nurses had sig. higher PTS scores than Doctors but no difference in clinical PTSD
Czaja et al. (2012) USA	Nurses (n=173). Paed	PTSD (PDS, MBI)	21% (n=36) met criteria for PTSD. 86% (n=31) of those with PTSD had burnout profile.
Dominguez-Gomez et al. (2009) USA	Nurses (n=67). Emergency	STS (STSS)	33% (n= 22) met diagnostic criteria for all PTS symptoms (1 intrusion, 3 avoidance, 2 arousal).
Elkonin and van der Vyver (2011) South Africa	Nurses (n=30). Intensive Care	CF (ProQOL R IV)	40% (n=12) had high CF. CF and BO significantly correlated.
Halpern et al. (2010) Canada	Ambulance workers (n=228).	PTSD (IES-R, MBI)	High PTSD in 8% (n=19). Duration of response related to symptom frequency.
Halpern et al. (2012) Canada	Emergency Medical Tech., (n=223)	PTSD (IES-R, MBI)	Current state of mind, appraisal and personal experience related to traumatic stress response.
Hooper et al. (2010) USA	Nurses (n=109). Various hospital	CF (ProQOL R-IV)	28% (n=31) high-risk CF, 56% (n= 61) moderate- risk CF. No sig. diff between emergency and inpatient nurse PTS.
Injeyan et al. (2011) USA & Canada	Genetic Counsellors (n=335).	CF (ProQOL- R-IV)	17% (n=75) high-risk for CF; 57% (n=163) moderate-risk for CF. 27% considered leaving their job due to CF.
Jonsson and Segesten (2004a) Sweden	Ambulance personnel (n=362).	PTSD (IES-15)	20% (n=48) ‘PTSD caseness’ (>26). The length of time in the profession was sig. higher for those with PTS ‘caseness.’
Kerasiotis and Motta (2004) USA	Nurses (n=124). Trauma centre	PTSD (MPSS-SR)	No difference in PTS severity between ER, ICU and general nurses. Experience not sig. related to PTS.
Komachi et al.	Nurses	STS (IES-	Events involving abortion,

(2012) Japan	(<i>n</i> =159). Various hospital; 4% midwives.	R)	miscarriage and seriously ill neonates perceived (on average) the most severe to encounter.
Maia and Ribeiro (2010) Portugal	Nurses and doctors (<i>n</i> =59). Emergency	PTSD (PTSD scale)	Perceived exposure to trauma was high but PTS prevalence was low (3% <i>n</i> =2).]
Maiden et al. (2011)* USA	Nurses (<i>n</i> =205). Critical care	CF (ProQOL)	Low average level of CF (<i>M</i> =13.82, <i>SD</i> = 6.55).
Mangoulia et al. (2010) Greece	Nurses (<i>n</i> =335). Intensive care	STS (ProQOL R-IV)	58% high risk CF, 56% high risk BO. CF and BO significantly correlated.
Mealer et al. (2012) USA	Nurses (<i>n</i> =744). Intensive Care Units (various)	- (PDS, MBI)	21% (<i>n</i> =156 of 740) reported symptoms suggestive of PTSD, of which 70% had symptoms >3 months.
Mealer et al. (2009) USA	Nurses (<i>n</i> =332). Intensive/ non- intensive care	PTSD (PTSS-10 PDS, MBI)	18% (<i>n</i> =61) met PTS diagnosis. 61% (<i>n</i> =37) had symptoms > 6 months. 98% (<i>n</i> =59) with PTS had symptoms of BO.
Mealer et al. (2007) USA	Nurses (<i>n</i> =351). Intensive care (ICU), general.	PTSD (PTSS-10)	24% (<i>n</i> =54 of 230) ICU nurses and 14% (<i>n</i> =17 of 121) general nurses 'positive' for PTS. ICU nurses sig. greater PTS.
Porter (2007) USA	Physicians, nurses, assist. (<i>n</i> =25).	CF (ProQOL)	Role and time spent working in a week not sig. related to scores of CF or BO.
Potter et al. (2010) USA	Oncology workers (<i>n</i> =153). Various	CF (ProQOL- R-IV)	Higher than average CF and BO. Experience associated with CF and BO. Symptoms not sig. ass to extent of experience in work.
Ruitenburt et al. (2012) Netherlands	Physicians (<i>n</i> =423).Hospit al.	PTSD (IES (Dutch), MBI)	<i>n</i> =56 (15% of <i>n</i> =380) overall, or 9% (of <i>n</i> = 178) men and 20% (of <i>n</i> =201) female respondents exceeded cut off (≥26)
Townsend and Campbell (2009) USA	Nurses (<i>n</i> =110). Sexual assault	STS (CFST, MBI)	25% had symptoms on average 'a few times after' each encounter. Several organisational factors predicted STS.
Udipi et al. (2008) USA	Genetic counsellors (<i>n</i> =222). Various	CF (ProQOL)	25% scored >13 (normed average) on CF symptoms. CF predicted by BO in a multiple regression model.
van der Ploeg and Kleber (2003) NL	Ambulance workers (<i>n</i> =123). Emergency	PTS (MBI (NL); IES Dutch.)	Over 10% clinical level PTSD. 10% experiencing fatigue placing them at 'high risk for sick leave and work disability.'
van der Ploeg et al. (2003) NL	Forensic Doctors (<i>n</i> =84). Hospital	PTSD (MBI (NL); IES	14% (<i>n</i> =9) 'clinical PTSD,' 44% of these also had BO. PTS sig. related to number of incidents.
Von Rueden et al. (2010) USA	Nurses (<i>n</i> =128). Trauma care	STS (Penn Inventory)	7% (<i>n</i> =9) in clinical range PTS (≥30). These nurses had less experience in the profession than those without.

Wallbank (2010) UK	Doctors ,midwives (<i>n</i> =30). Obs/gyn.	PTSD (CF IES, ProQOL)	Average total PTS score <i>M</i> = 22.25, <i>SD</i> = 14.12). Treatment (supervision) group significantly less CF and BO at T2.
Yoder (2010)* USA	Nurses (<i>n</i> =71). Intensive Care	CF (ProQOL R- IV)	16% estimated to be 'at risk' of CF. CF significantly associated with BO.
Young et al. (2011) USA	Nurses (<i>n</i> =70). Intensive/ intermediate care	CF (ProQOL V)	No-one was high-risk for CF. 76% (<i>n</i> =19) IMC & 56% (<i>n</i> =24) low-risk. No diff in CF scores for ICU or IMC nurses.

NOTE: ProQOL: Professional Quality of Life Scale, CFST: Compassion Fatigue Self Test for Practitioners, IES/- R: Impact of event scale/ -Revised, MBI/ NL: Maslach Burnout Inventory/ Dutch Version, PCL-C: PTSD Checklist for Civilians, STSS: Secondary Traumatic Stress Scale, MPSS-SR: Modified PTSD Symptom Scale Self-Report, PDS: Posttraumatic Diagnostic Scale, PTSS-10: Posttraumatic Stress Syndrome 10 Questions Survey. – no specific response focus stated. *Also used quantitative methodology

Table 1.4 Details of qualitative papers included in the review

Author and Country	Profession	Method, Analysis	Focus	Main Findings
Austin et al. (2009) Canada	Nurses (<i>n</i> =5), various.	Semi-structured interviews, Interpretive.	CF	CF related to 'emotional distancing' from patients and ignoring adverse emotions to cope.
Beavan and Stephens (1999) NZ	Nurses (<i>n</i> =9), A & E.	Interviews (1 hour), Common themes identified.	-	Personal, contextual, control and organisational themes identified, some distinct for nurses.
Beck and Gable (2012) USA*	Nurses (<i>n</i> =322) Labour and Delivery	Written description of traumatic event, Content analysis	STS	Certain event characteristics, nurses' responses and appraisals magnified response. STS described.
Benoit et al. (2007) Canada	Genetic counsellors (<i>n</i> =12)	Two focus groups (2 hours), Consensual Qualitative Research	CF	All experienced CF. Triggered by patient suffering; giving bad news. Emotions and empathy important.
Goldblatt (2009) Israel	Nurses (<i>n</i> =22), caring for abused women.	Interviews (1 hour), Thematic content analysis.	-	Emotions, attitudes, life balance difficult. Beliefs in safety affected. Avoided emotional engagement.
Goldbort et al. (2011), USA	Nurses (<i>n</i> =9) Intrapartu m care	Semi-structured interviews, Descriptive phenomenology	STS	Busy, unexpected occurrences. Memories lasted several decades. Nightmares, visualisations reported.
Jonsson and Segesten (2004b) Sweden	Ambulanc e workers (<i>n</i> =10)	Interviews, Descriptive phenomenology	-	Feeling guilt, identification with patients, 'raising a shield,' occurred after trauma. PTS reported.
Jonsson and	Ambulanc	Descriptive	PTSD	Identification with the victim

Segesten (2003) Sweden	Health workers (N=52)	narratives., Phenomenological Approach		of an event. Difficulties preparing for unforeseen events.
Lavoie et al. (2011) Canada	Emergency nurses (n=12)	Interviews, focus group (N=9), Data analysis framework	PTSD	Frequency of PTS declined with age. Social and peer support important.
Maiden et al. (2011)* USA	Nurses (n=5),	Focus group, central recurring themes.	CF	Fear, horror reported when made medication error.
Maytum et al. (2004) USA	Nurses (n=20), paediatric	Open ended interviews/ probe questions., Content analysis.	CF	Triggers; unable to provide care. CF and BO linked. Severe symptoms related to role difficulty.
Perry et al. (2010) Canada	Nurses (n=19), oncology	Narrative., Data analysed thematically.	CF	Unable to ease suffering, identification, considering leaving, related to CF.
Udipi et al. (2008)* USA	Genetic Counsellors (n=126)	Description of incident. , Interpretive content analysis	CF	Empathic concern, doubting practice, disengaging. Traumatic recollections. Effects home life.
Yoder (2010)* USA	Nurses (n=71) ITU	Two questions; narrative response, Content analysis	CF	Triggers: caring for patients, patient condition, system/organisational issues, personal issues.

2.3.2. Indirect exposure to traumatic perinatal events

Three quantitative studies investigated the experiences of professionals in relation to traumatic perinatal events. A study with labour and delivery nurses in America (n=464) reported findings indicating that 35% of the total sample experienced moderate to severe STS following traumatic perinatal event exposure (Beck & Gable, 2012). Despite a low response rate (15%), the large sample size and national recruitment strengthen generalisability of findings. An earlier study explored midwives' experiences of miscarriage, stillbirth and neonatal loss in the UK. Wallbank (2010) investigated the effectiveness of clinical supervision, provided by a clinical psychologist for the purposes of the study. Those receiving clinical supervision reported significantly lower symptoms of intrusion, avoidance, CF and burnout over time. However, midwives and doctors were recruited from one hospital and only 19% of those contacted took part. A third study of hospital nurses in Japan, four percent (n=7) of which were midwives, investigated the type of events subjectively perceived to be the most traumatic (Komachi et al., 2012). Events relating to the care of pregnant women during the perinatal period were perceived to be the most severe by nurses who had experienced a traumatic event of this kind, in comparison to other events encountered in clinical practice.

Two qualitative studies investigated responses to traumatic perinatal stressors using qualitative methodology. Beck and Gable (2012) incorporated a qualitative element into their large survey of labour and delivery nurses and over three hundred event descriptions were analysed. Nurses reported responses of secondary traumatic stress, such as flashbacks. A smaller study of nine intrapartum nurses also reported secondary traumatic stress responses in relation to traumatic birth events (Goldbort et al., 2011), such as experiencing nightmares or visualisations of the event.

2.3.3. Prevalence of traumatic stress responses in health professional groups

The proportion of other professionals reporting symptoms of PTSD suggestive of a clinical diagnosis ranged from three to twenty-five percent (Alexander & Klein, 2001; Czaja et al., 2012; Halpern et al., 2010; Jonsson & Segesten, 2004; Maia & Ribeiro, 2010; Mealer, 2007; Mealer et al., 2009; Mealer et al., 2012; Ruitenburg et al., 2012; Van der Ploeg et al., 2003; Van Der Ploeg & Kleber, 2003; Von Rueden et al., 2010). Cut off scores used to infer clinical diagnosis were generally informed using guidelines for the respective measure. Four studies used a cut off of 26 or greater on the Impact of Event Scale (IES) or a similar version adapted for language (Alexander & Klein, 2001; Ruitenberg et al., 2012; Van der Ploeg & Kleber, 2003; Van der Ploeg et al., 2003). Two studies used a cut off of greater than 35 on the PTSS-10 (Mealer et al., 2007; Mealer et al., 2009) and one study used a cut off of a

mean score of >1.5 (equivalent to >33) on the IES-R (Halpern et al., 2012a). Two studies inferred clinical diagnosis based on the presence of one intrusion, three avoidant and two arousal symptomatology using the Posttraumatic Diagnostic Scale (PDS, Czaja et al., 2001; Mealer et al., 2012). One study did not state the method of clinical inference (Maia & Ribeiro, 2010).

The highest prevalence of PTS was identified within a study with nurses engaged in either intensive care (ICU) or non-intensive care duties (n=351), where nearly 25% of ICU nurses reported symptoms of PTSD that exceeded the suggested clinical cut off (>35) on the PDS (Mealer et al., 2007). However, a similarly large study of nurses engaged in trauma care (n=262) found that just seven percent reported symptoms above an estimated clinical cut off (Von Rueden et al., 2010). This study achieved a response rate of 60%. However, the nurses worked within one hospital site, which may limit representativeness.

Findings from qualitative studies with health professionals also reported imagery and intrusive thoughts in response to the traumatic events of recipients of their care (Udipi et al., 2008). Emergency nurses described symptoms of hyperarousal, avoidant behaviour and other responses suggestive of PTSD after witnessing traumatic events whilst providing care (Lavoie et al., 2011). Genetic counsellors described, “reliving an aspect of the trauma, avoidance of anything potentially related to the trauma, and physical symptoms of heightened irritability” following traumatic encounters at work (Benoit et al., 2007, p. 302).

Symptoms attributed to CF were also identified in response to indirect trauma using various versions of the ProQOL (Stamm, 2010). The severity of CF was inferred using scores from the STS scale, which identifies the ‘potential risk’ of CF responses occurring from the frequency of intrusion, avoidance and arousal symptomatology. Therefore, although conceptualised differently, the nature of symptomatology is largely similar to PTS symptomatology. Findings from studies of nurses often reported that over a quarter report symptoms suggestive of high-risk CF and over half reported symptoms suggestive of a moderate risk CF (Abendroth & Flannery, 2006; Elkonin & van der Vyver, 2011; Hooper et al., 2010; Yoder, 2010). Potter et al. (2010) found that over a third of oncology workers (n=153) reported symptoms indicative of high-risk CF. Responses from several professional groups engaged in oncology care were combined within this study, which makes it difficult to draw conclusions. The study was conducted within one site, with a response rate of 34 percent, limiting generalizability. Findings from two studies with nurses indicated low levels of CF symptomatology (Maiden et al., 2011; Young et al., 2011). One such study was with

heart and vascular nurses from one hospital site (Young et al., 2011). However, exposure to trauma was assumed through the nature of work undertaken.

CF was interpreted in a variety of ways by different professional groups (Benoit et al., 2007; Perry et al., 2010). Perry et al. (2010) found that nurses (n=19) were unsure about what constituted feelings of CF, but described 'knowing something was wrong' and feelings of fatigue as general indicators. Additional descriptions identified feelings of tiredness, fatigue, and exhaustion (Austin et al., 2009; Maytum et al., 2004; Perry et al., 2010) and intense emotional responses, feeling overwhelmed and helplessness as associated with CF (Benoit et al., 2007).

Secondary traumatic stress was only specifically measured within one study of emergency nurses (n=68). Findings indicated that a third of nurses fulfilled full symptom criteria for STS, and 15% of the sample did not fulfil any symptom criteria for STS. Symptom criteria corresponded to experiencing at least one intrusion, three avoidant and two arousal symptoms 'occasionally,' 'often,' or 'very often.' Only nurses with at least six months experience in the profession were recruited for the study, to ensure that they had "experienced enough repeated exposure to traumatic events" (Dominguez-Gomez & Rutledge, 2009, p. 200). However, experiences of traumatic events were assumed through the role undertaken by the nurses.

There were no quantitative studies investigating responses of VT within healthcare professionals. Furthermore, no qualitative study primarily investigated the cognitive belief changes associated with VT. However, a study of nurses working with individuals who had experienced abuse identified cognitions suggestive of those associated with VT (Goldblatt et al., 2009). The authors identified changes to beliefs about safety, where nurses report seeking confirmation from a partner about their safety from domestic violence in their personal relationship after witnessing the effects on a patient.

2.3.4.Aspects associated with increasing vulnerability to traumatic stress responses

Within the quantitative literature, several contextual factors were identified by individuals as triggering or contributing to a symptomatic response. Identifying with the victim (Jonsson & Segesten, 2003), experiencing difficulty witnessing the patients' upset (Beavan & Stephens, 1999; Udipi et al., 2008) and engaging empathically with patients (Beavan & Stephens, 1999) were reported as difficult aspects and potential triggers of traumatic stress. The nature of the events encountered (unpredictable, often negative; Jonsson & Segesten, 2003) and

believing the provision of care to be ‘futile’ to those unlikely to fully benefit (Yoder et al., 2010, p. 194) were also identified as contributing to symptoms of PTSD and CF.

Work-related stress and other organisational factors were often perceived to influence responses to traumatic events (Abendroth & Flannery, 2006; Austin et al., 2009; Maytum et al., 2004; Perry et al., 2010; Townsend & Campbell, 2009; Yoder et al., 2010). Working busy shifts with staff shortages (Austin et al., 2009), and feeling unable to provide the care desired (Maytum et al., 2004) were perceived to influence responses. Yoder et al. (2010) found that nearly a third of nurses reported triggers for CF or BO arising from organisational stressors, including “constant prioritizing” and “juggling 100 things at a time” (p. 194).

Inherent in many of the triggers for traumatic stress identified was empathic engagement with recipients of care (relating to patient issues), work-related stress (relating to organisational issues) and experience within the profession. The following sections will explore these issues in greater detail.

Empathic Engagement

Empathy can be defined as the affective and cognitive ability to recognise and experience other people’s emotions and mental states (Lawrence, 2004). Study findings have indicated that empathising with another’s distress leads to similar feelings emerging in the professional (Goldblatt, 2009; Jonsson & Segesten, 2004). However, some professionals reported reducing their level of empathic engagement with patients to protect themselves (Benoit et al., 2007; Jonsson & Segesten, 2004). Findings from a study of nurses identified a focus on ‘technical’ care instead of empathic engagement with patients as preventative of adverse feeling (Austin et al., 2009). Whilst empathy appears likely to influence traumatic stress, the association requires further exploration.

Organisational stress

Symptoms of burnout were often found to correlate positively with symptoms of traumatic stress (Burtson & Stichler, 2010; Van der Ploeg et al., 2003; Yoder, 2010). Some study findings indicated that a high percentage of those with symptoms of PTSD, CF and VT were simultaneously experiencing symptoms of burnout (Abendroth & Flannery, 2006; Czaja et al., 2012; Mealer et al., 2009). For example Mealer et al. (2009) found that 98% of nurses reporting symptoms of PTSD also reported symptoms of burnout (total $n=332$). Feeling overextended, fearing adverse consequences to their care, and unpleasant team interactions were associated with PTSD symptomatology in nurses (Czaja et al., 2012). Issues with low staffing levels and greater feelings of moral distress were also associated with greater

symptoms of CF in another study with nurses (Maiden et al., 2012). Due to the correlational nature of many study designs, the direction of effect between responses to work stress and traumatic events is unclear. However, findings from these studies demonstrate that professionals experiencing traumatic stress responses often simultaneously report a high degree of work-related stress.

Extent of professional experience

Less experience was associated with more frequent symptoms of STS in labour and delivery nurses (Beck & Gable, 2012). Furthermore, a study of intrapartum nurses identified that a greater extent of traumatic event experience was helpful in reducing the negative impact of subsequent experiences (Goldbort et al., 2011). However, greater experience has also been associated with more frequent symptoms of PTSD (Jonsson & Segesten, 2004, Czaja et al., 2012). Findings from other studies indicated no association between experience in the profession and responses to traumatic events (Maia & Ribiero, 2010; Kerasiotis & Motta, 2004). If professional experience influences vulnerability for traumatic stress responses, it appears likely to be a product of many different factors, such as support, work-stress, and the nature of the work, rather than a direct association.

2.4. Discussion

The review identified symptoms of traumatic stress in several healthcare professional groups at various frequencies. Three studies considered the impact of indirectly experienced traumatic perinatal events. The percentage of professionals reporting clinically relevant symptoms ranged between three (Maia & Ribeiro, 2010) and 25% (Mealer et al., 2007). Empathy and work-related stress were frequently associated with traumatic stress responses. There was evidence suggesting that experience within a professional role could influence traumatic stress responses; however, this finding was not consistent throughout the review. The applicability of these factors to midwives working within healthcare organisations will be considered in the following sections, as this represents the majority of midwives in the UK and similar or significant proportions in other countries with similar maternity systems.

2.4.1. Application of findings with relevance for midwifery

Findings from healthcare professionals suggest that stressful work situations contribute to traumatic stress symptoms in healthcare professionals. Study findings have also identified stress in the midwifery profession (Birch, 2001; Mackin & Sinclair, 1998). Burnout is not a new concept within the midwifery profession and has been identified in midwives, maternity

workers, and nurse midwives internationally, including England and Wales (Sandall, 1997), Croatia (Knezevic et al., 2011) and the Netherlands (Bakker et al., 1996).

There are several potential sources of work stress reported in the midwifery literature. A midwife is considered a 'responsible and accountable professional' engaged in the provision of care for low-risk women (NMC, 2009; DOH, 2010). The level of autonomy experienced by the midwife has the potential to heighten stress by affecting feelings of responsibility during adverse perinatal events. Government initiatives (National Institute for Health and Care Excellence, NICE, 2008) have advocated the notion of women-centred care. This implicates midwives to provide a certain quality of care that encourages the woman to make individual decisions about their birth and to have access to continuous support throughout. According to a case study of practising midwives (Bryson & Deery, 2010), this level of woman-centred care requires a certain amount of time that is not feasible with the constraints placed on them simultaneously by their organisation, and has contributed to midwives leaving the profession.

The potential for litigation following adverse events could also increase feelings of stress, especially in countries particularly affected by litigation procedures. Upon qualification, midwives are assigned sole responsibility for the consequences of their actions. Although the majority of UK midwives are employed within a trust, complaints made about the consequences of care can require investigation and it is policy within the NHS to promptly pursue any claims of malpractice (NMC, 2013). A fear of litigation has been associated with reduced confidence and changes in practice (Hood et al., 2010; Surtees, 2007; Symon, 2000). The knowledge that litigation can occur, and the potential consequences of an investigation, could exacerbate reactions to events and hold implication for the nature of care provided to mothers.

Aside from factors intrinsic to the working environment, findings from other healthcare professionals indicate that empathic engagement could predispose a traumatic stress response. Empathic engagement plays a pivotal role in maternity care, especially in the UK (DOH, 2010). Some midwives feel that building relationships with women helps them to deliver better care (Hunter, 2006), but could mean some midwives experience adverse events occurring to women in their care as "personal bereavement" (p. 319). Therefore empathic relationships with women could be an issue of salience for midwives in relation to potential traumatic stress responses.

This review identified several gaps in the literature. Firstly, there was no specific investigation into the cognitive worldview changes associated with VT in both the quantitative and qualitative literature reviewed. Only one study evaluated the efficacy of a supportive intervention for reducing traumatic stress responses, as there was a general emphasis on describing symptom prevalence and prediction within all of the studies reviewed. Therefore further research acknowledging the potential for cognitive changes, in addition to the acute emotional and behavioural symptoms of PTS, to occur following indirect exposure to trauma is required. There was also a paucity of research evaluating supportive interventions, indicating a need for research to identify methods of preventing the perception of trauma or reducing the development of traumatic stress symptoms in healthcare professionals.

2.4.2.Limitations of the review

Findings from quantitative studies typically indicated low response rates with potential for selection bias during recruitment (Burtson & Stichler, 2010; Halpern et al., 2010; Potter et al., 2010). Small sample sizes (Dominguez-Gomez & Rutledge, 2009; Hooper et al., 2010; Porter, 2007; Wallbank, 2010; Yoder, 2010; Young et al., 2011) also limit the generalisability of findings. A limitation in the review was to include only studies published in English. There may be applicable literature published in other languages that were not accessed due to the unavailability of translation. There was no measurement of cognitive belief change associated with VT. Finally, some study designs assumed exposure to trauma through professional role (Dominguez-Gomez & Rutledge, 2009; Mealer et al., 2009; Young et al., 2011) when perception of an event as traumatic is personal and should be considered on an individual basis.

2.4.3.The need for further research

Despite the salience of factors identified in other healthcare professional groups, there are aspects unique to midwifery that limit extrapolation. Many healthcare providers provide care during events that are largely considered to be negative. Midwives provide care in what is anticipated and experienced as a positive event (Mander, 2001). Findings from several studies in this review indicated a high frequency of exposure to traumatic events, sometimes on a weekly basis (e.g., Burtson & Stichler, 2010). Extreme adverse events (e.g., maternal death) in developed countries are fortunately rare and whilst other adverse perinatal events occur more frequently, they are still relatively uncommon. The midwifery profession is also predominantly female. Findings from other studies have indicated that females are more likely to respond to trauma with PTSD (Voges & Romney, 2003) than men. This has

implications for extrapolating findings from research mainly including men in their investigation (e.g., Alexander & Klein, 2001; Jonsson & Segesten, 2004a).

If midwives perceive some perinatal events as traumatic and respond in ways similar to those found in other healthcare professionals, then there are potential implications for the midwife's personal wellbeing, women in receipt of midwifery care, and the overall organisational climate. Symptomatic responses can be distressing, enduring (e.g., Alexander & Klein, 2001), and can affect home life and relationships (e.g., Benoit et al., 2007; Udipi et al., 2008). Traumatic stress could also affect the empathic care provided by a practitioner. This is particularly important in the context of midwifery, as care provided by the midwife can influence the mother's perception of her childbirth experience (Elmir et al., 2010).

The association between traumatic and work-related stress holds implications for the efficiency of the maternity services. Burnout has been associated with increased absenteeism and staff turnover (Maslach et al., 2001). At a time of staff shortages in midwifery (Malott et al., 2009) and increasing birth rates in some countries (Office for National Statistics, ONS, 2010), preventing attrition from the midwifery workforce is important.

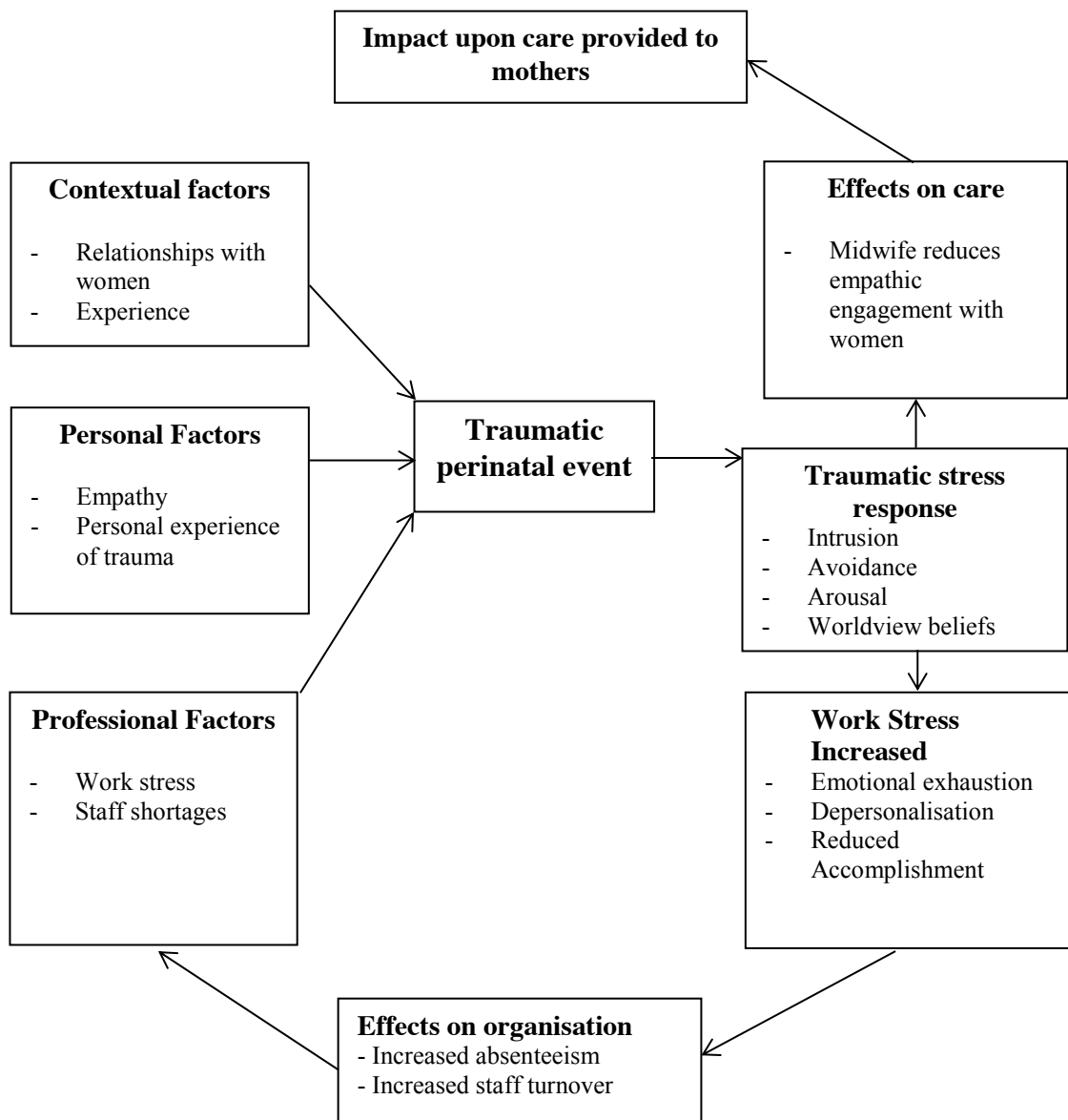
Whilst not specifically addressed by studies within the review, personal (and direct) experiences of trauma could predispose traumatic stress responses following subsequent (indirect) exposure (Breslau et al., 2009). Pearlman and Mac Ian (1995) attempted to establish the different independent variables and dependant variables involved in VT by sampling 188 self-identified trauma therapists. They found evidence that previous history of personal trauma had an effect on the level of distress in response to client's trauma narratives compared to those who have no personal history. Mander (2001) reported a case of one midwife who, whilst giving birth herself, experienced flashbacks of an adverse event that had happened to a woman previously in her care. This suggests that there is potential for personal and professional experiences to interact. The personal traumatic experience of midwives requires further attention, specifically in relation to personal childbirth trauma.

Figure 1.2 demonstrates the potential relationships between factors that may predispose or predict traumatic stress responses following an adverse perinatal event; these hypothesized relationships require testing in large-scale empirical research. Organisational variables (staff shortages, busy shifts) and personal vulnerabilities (experiences, empathic relationships) could influence the development of traumatic stress responses. This could intensify burnout, or cause the midwife to withdraw from empathic engagement, thus affecting experiences of care for women.

2.4.4. Conclusion and rationale for further investigation

There is a paucity of empirical investigation into the experiences of maternity health professionals who potentially encounter traumatic events within the perinatal period. Four studies investigated the perceived impact of indirect exposure to events that occurred within the perinatal period. Only one of these studies included midwives in the UK, and it was limited in terms of sample size and strategy. There are several factors associated with increased vulnerability to traumatic stress in health professionals that also hold particular salience for the midwifery profession; namely, empathic engagement with recipients of care, working within a stressful environment, and the extent of experience held within the profession. Findings from health professionals indicate that experiencing and responding to trauma in a midwifery context could adversely affect midwives' wellbeing, the care provided to women, and contributes to an adverse organisational climate. Therefore there is a need to investigate midwives' experience, perception and response to events occurring within the perinatal period that are perceived by midwives to be traumatic. The hypothetical model depicted in Figure 1.2 provides a framework for investigation.

Figure 1.2. A model of individual and organisational factors contributing to traumatic stress in midwives, and implications for mothers and organisations.



3. Presentation of aims

3.1. Primary aim

The primary aim of this thesis was to investigate midwives' experiences of events encountered whilst providing care to women that they (the midwife) perceived to be traumatic, taking in to account the nature of this experience, symptomatic and perceived responses and impacts, and the use of supportive strategies.

3.2. Specific objectives

- To explore the nature of events perceived as traumatic by midwives, considering aspects that may influence or determine perception of an event as traumatic
- To explore the frequency and nature of traumatic perinatal events encountered by midwives whilst providing care to women
- To investigate the proportion and severity of traumatic stress and associated symptomatology reported by midwives following traumatic perinatal event exposure
- To identify factors predictive/protective of the reported traumatic stress symptoms.
- To identify whether there is any association between symptoms of traumatic stress and symptoms of burnout
- To conduct a factor analysis of traumatic stress and burnout symptoms in order to investigate and identify any underlying patterns of response. If applicable, describe an integrated construct and identify factors predictive of this

3.3. Hypotheses

- i. There will be a difference in traumatic stress symptoms reported by midwives depending on their level of exposure to traumatic perinatal events
- ii. Frequency of exposure to traumatic perinatal events will predict traumatic stress symptoms in midwives
- iii. The extent of professional experience (years in the profession) will predict traumatic stress symptoms
- iv. Personal experience of trauma (in general) will predict traumatic stress symptoms in midwives after exposure to traumatic perinatal events
- v. Personal experience of trauma (specifically in relation to childbirth) will predict traumatic stress symptoms in midwives after exposure to traumatic perinatal events
- vi. Higher levels of empathy will predict traumatic stress in midwives after exposure to traumatic perinatal events
- vii. Symptoms of traumatic stress will be associated with symptoms of burnout

- viii. Symptoms of traumatic stress and burnout will be associated with perceived levels of impairment to daily functioning in personal, work, and home life

An additional aim of the thesis will be to explore in further detail aspects relating to midwives' experiences of traumatic perinatal events as identified within the postal survey. This will be explored using interview methodology with a selection of midwives from the postal survey. Specific aims for this study are informed by the results from the postal survey, and presented at the beginning of chapter 5.

CHAPTER 2. Method: A mixed-methods investigation into the experience, perception and impact of traumatic perinatal event exposure in midwives

Two main studies were conducted as part of this thesis. The first study was a national postal survey, and involved two investigations. These were a quantitative investigation into symptomatic prevalence and prediction, and a qualitative investigation into the nature of traumatic events. Findings from these studies are discussed in chapters 3 and 4 respectively. The second study was an interview study with a subsample of midwives from the postal survey. Findings from this study are presented in chapter 5.

This chapter is divided into two sections. The first section will outline the methodology used for the national postal survey. The second section will outline the methodology for the interview study.

1. Section 1: Postal survey (Study 1a & b)

1.1. Design

A postal survey was conducted.

Ethical Approval

The study was reviewed and received ethical approval from the Department of Psychology's Ethics Committee at the University of Sheffield in May 2011. An amendment was sought on the grounds of a scale replacement, and this was granted in September 2011.

Consultation with experts

The project was reviewed and approved as suitable by representatives from the Royal College of Midwives' Education and Research Committee. Two experienced midwives from a nearby hospital were consulted about the aims and questions to be addressed within the project.

1.2. Participants

Participants were qualified midwives currently employed within the United Kingdom and registered with the Royal College of Midwives. There were no restrictions placed on the age, gender, experience or professional designation of midwives invited to participate. The sample strategy was devised to exclude retired and student midwives. Student midwives were not included as it was considered that their experience and autonomy in practice differs from qualified midwives. Retired midwives were not included to improve the likelihood that

events would reflect contemporary practice, in order to maximize the utility of results. The inclusion criterion was as follows:

- Inclusion criteria
 - Post registration (qualified) midwife
 - Any age, professional designation, extent of experience in the profession
- Exclusion criteria
 - Retired for more than six months
 - Student midwife/ pre-registration

1.3. Procedure

Contact details for 2800 qualified midwives were randomly sampled from the Royal College of Midwives' (RCM) national membership database. This was conducted by a member of staff within the RCM and randomized using a random number generator. Questionnaire packs were distributed directly from the RCM to midwives in three tranches. A smaller first tranche ($n=100$) was distributed in November 2011 to provide an indication of response rates and item completion. The second tranche ($n=1500$) was distributed in February 2012. A final tranche ($n=1200$) was distributed in April 2012. Several brief articles were placed within the news section for the RCM's publication *Midwives* to coincide with the distribution of questionnaires in order to raise the profile of the study and increase response rate. See appendix A1-3 for copies of materials distributed to participants.

1.4. Materials

Details of the following demographic variables were collected: age, gender, marital status, ethnicity, highest midwifery-related qualification, parity and mental health history. Details of midwives years' experience in the profession, professional designation and current job role, current clinical activity, employer and NHS Band (if applicable) were also collected.

Experience of traumatic perinatal events

Experience of a traumatic perinatal event was defined using a criterion informed by the DSM-IV-TR (APA, 2000) criterion A for PTSD; that the midwife witnessed or listened to an event where they perceived the mother and/or the baby to be at risk of serious injury or death and where they experienced a sense of fear, helplessness or horror. Midwives were asked to estimate the number of events they had experienced over the duration of their career to date, and also specifically within the previous five years. Exposure over 5 years was used to establish exposure to events contemporaneous to current practice. Midwives also provided

a short (4-5 lines) description of an event they had witnessed and /or listened to. These were later analysed for Study 1b (discussed further in chapter 4).

Personal trauma history

Personal experience of trauma was assessed using the DSM-IV-TR (APA, 2000) criterion. In order to establish the nature of previous trauma, midwives were asked to briefly describe their personal traumatic event. A separate question asked whether the participant considered their personal experience of giving birth (or their partner's) to be traumatic.

Perceived impact of traumatic perinatal events

Midwives indicated whether they had ever taken time off sick following a traumatic perinatal event experience (Y/N), whether they had ever changed their professional allocation on an a) short term or b) long term basis (Y/N/considered), and whether they had ever seriously considered leaving the midwifery profession due to a traumatic perinatal event experience (Y/N). Midwives also indicated whether they felt their experience had impacted on their personal or professional life (Y/N), and described the nature of this impact in terms of beneficial and/or negative aspects.

The following measures were used to assess symptoms of PTSD, worldview beliefs, burnout, level of empathic concern, and the level of perceived impairment experienced following traumatic perinatal events.

The Impact of Event Scale- Revised (IES-R; Weiss & Marmar, 1997).

Symptoms of posttraumatic stress were measured using the Impact of Event Scale- Revised (IES-R, Weiss & Marmar, 1997). There are 22 items measuring symptoms of avoidance (8 items), increased arousal (6 items) and intrusive symptoms (8 items). Responses are scored from 1 (not at all) to 4 (extremely), based on the extent to which the individual is currently experiencing the symptom. Example items from the IES-R are provided below:

- “Any reminder brought back feelings about it” (*Intrusion*)
- “I stayed away from reminders about it” (*Avoidance*)
- “I felt watchful and on guard” (*Increased arousal*)

The IES-R is an amended version of its predecessor, the Impact of Event Scale (Horowitz, Wilner & Alvarez, 1979). The main difference is the addition of arousal measures and an extra intrusion item. There was also a division of the item “I have trouble falling and staying

asleep” into “I have trouble falling asleep” (arousal) and “I have trouble staying asleep” (intrusion, Weiss & Marmer, 1997)

Internal consistency of the IES-R has been reported by Weiss and Marmer (1997) to be very high. They found Cronbach’s alphas for the intrusion scale to range from .87-.92. Alphas for the avoidance scale ranged from .84-.86 and the hyperarousal scale ranged from .79-.90 (Briere, 1997). Alpha values for the current study were .90 (intrusion), .82 (avoidance) and .87 (arousal). All of these are suggestive of high internal consistency and reliability. The IES-R is not intended as a diagnostic measure for PTS; however, it has been found to have some utility in identifying clinically relevant levels of symptomatology. A total score of 34 or above on the IES-R has been reported to predict clinical diagnosis of PTSD with sensitivity of 70%, specificity of 77%, PPV of 0.81 and NPV of 0.66 (Rash, 2008). This cut off was used within this study to infer presence of PTS at levels that were of clinical relevance.

World Assumptions Scale (WAS; Janoff-Bulman, 1989).

The nature of worldview beliefs held by midwives was assessed using the World Assumptions Scale (WAS, Janoff-Bulman, 1989). The WAS consists of 32 items divided into three subscales measuring beliefs about the benevolence of the world (12 items), meaningfulness of the world (12 items), and self-worth (10 items). These beliefs form an ‘assumptive world’ of an individual that can be prone to violation following a traumatic event (Janoff-Bulman, 1989).

Responses are measured in terms of how much the participant agrees with each item, using a scale of 1 (strongly disagree) to 6 (strongly agree). Belief scores can be obtained either from individual subscale totals or from the total score across the whole measure. Higher scores reflect more positive beliefs. Lower scores reflect more negative beliefs, and a more negative worldview, and lower scores would be theoretically predicted to be reported following a traumatic event. Example items from each of the three main subscales are provided below:

- “Human nature is basically good” (*Benevolence of the World*)
- “Generally, people deserve what they get in this world” (*Meaningfulness of the world*)
- “I usually behave in ways that are likely to maximize good results for me” (*Self-worth*)

Janoff-Bulman (1989) reported good levels of internal consistency for the subscales of self-worth, benevolence of the world, and meaningfulness of events (Cronbach's alpha values of .79, .75 and .82 respectively). Alpha coefficients for the current study were .79 (benevolence of the world), .65 (meaningfulness of the world) and .79 (self-worth). These are indicative of good internal validity. Despite some limitations in temporal consistency (Kaler et al., 2008, p. 331), the WAS has utility in identifying cognitive beliefs held by individuals with symptoms of PTS. Foa et al. (1999) found that the WAS classified 72% of traumatized individuals according to PTSD symptoms with a sensitivity of .91 and specificity of .26.

Maslach Burnout Inventory (MBI-HSS; Maslach, 1996).

Symptoms of burnout were measured using the Maslach Burnout Inventory Human Services Survey (MBI-HSS, MBI, Maslach, 1996). The license agreement for use of this scale is provided in the Appendix (A4-6). There are general, educator, and human-services specific versions of the MBI. The MBI-HSS was used within this study as it assesses responses of burnout in individuals engaged in a capacity of care. The MBI-HSS consists of 22 items divided into three subscales measuring emotional exhaustion (EE), depersonalisation (DP) and reduced personal accomplishment (PA). Responses are measured in terms of the frequency each statement is experienced by the participant, from 0 (never) to 6 (every day). Higher scores on the EE and DP and lower scores on the PA scale indicate a more severe case of burnout. Several items in the scale referred to 'recipients' of care. To minimise confusion, this was replaced with 'women in my care' for the present study. Example items from the MBI are provided below:

- "I feel depressed at work" (*Emotional Exhaustion*)
- "I don't really care what happens to [women who receive my care]"
(*Depersonalisation*)[amendment]
- "I have accomplished many worthwhile things in this job" (*Personal Accomplishment*)

Test retest reliabilities obtained from a variety of professions, and over a variety of periods of time, suggest low to moderately high levels of test-retest reliability (Maslach et al., 1996). Maslach et al. (1986) reported Alpha coefficients for emotional attachment items, depersonalisation subscales, and personal accomplishment subscales at .90, .79 and .71 respectively, suggestive of good internal validity. An additional study by Jenkins and Baird (2002) reported Cronbach's alphas of .91 (EE), .81 (DP) and .92 (PA). Alpha coefficients

for the present study were .90 (emotional exhaustion), .69 (depersonalisation) and .73 (personal accomplishment). All of which are indicative of high internal consistency.

The Interpersonal Reactivity Index (IRI; Davis, 1980)

The Interpersonal Reactivity Index (IRI) measures empathy as a multidimensional concept of cognition and affective perception (Davis, 1983). There are 28 items divided into four subscales of 7 items each. Responses are recorded in terms of agreement with each item, on a scale of 1 (does not describe me well) to 5 (describes me very well). The first subscale, perspective taking (PT), measures the cognitive empathy required to take on another's viewpoint. The fantasy subscale (FS) assesses the extent to which participants may imagine themselves or recreate the feelings of fictitious characters (Davis, 1983). The third subscale measures empathic concern (EC), which is the level of concern participants feel for others. The final subscale refers to feelings of personal distress (PD) that may be experienced by those in social environments. The latter two scales refer mainly to what is referred to as emotional empathy, or responses that are associated with emotional response.

The psychometric properties of the IRI have been reported at levels indicative of good internal consistency. Davis (1980) reported alpha coefficients for each of the subscales, all within the region required to indicate internal consistency. Values were as follows; Fantasy (males .78, females .79), perspective taking (males .71, females .75), empathetic concern (males .77, females .75) and personal distress (males .77, females .75). Test-retest reliability was calculated using correlations between measurements taken using the IRI on undergraduates at two time points. Correlations ranged from .61- .79 for males and .61-.79 for females (Davis 1980). Although some limitations have been reported, the IRI is considered an effective self-report measure of empathy (Bahon-Cohen & Wheelwright, 2004).

For the purposes of this study, only the empathic concern subscale was used. The alpha coefficient for the EC subscale in the present study was .70, indicative of good internal reliability. An example item from this scale is detailed below:

- “I often have tender, concerned feelings for people less fortunate than me”
(*Empathic concern*)

The Sheehan Disability Scale (Sheehan, 1983)

An important element of the diagnostic criteria for PTSD is evidence of impairment in “social, occupational or other important areas of functioning” (APA, 2000, p 463). Therefore

the Sheehan Disability Scale (SDS; Sheehan, 1983) was included within the questionnaire as an assessment of perceived impairment to different domains of life following experiencing a traumatic perinatal event. The SDS provides a brief, self-report measure of impairment associated with symptoms in the three areas of social, occupational and family-life functioning. These three areas represent the three items of the measure. Responses to each item are rated on a scale of 0 (not at all) to 10 (extremely). Item structure is shown below.

- “My experiences of traumatic perinatal events have affected my [work/social/family or home] life}

Psychometric analysis of the SDS reveals excellent reliability and validity values. Arbuckle et al. (2009) assessed the psychometric properties of the SDS using a sample of clinically diagnosed participants with Bipolar (I and II). The Cronbach’s alpha value for the total measure was .89. The test-retest reliability over time was adequate for the total measure, with a correlation coefficient of .73 (Arbuckle et al., 2009). Cronbach’s Alpha coefficient was .91 within the present study.

1.5. Rationale for use of measures and pilot

Measures were selected for their validity, reliability, acceptability (in terms of item content) and brevity. Through appraising options for assessment of PTSD symptoms, the IES-R was selected based on good psychometric properties and, as indicated by the literature review, previous use within health professional populations to assess responses to indirect trauma. Whilst alternative options were available, for example the Posttraumatic Diagnostic Scale (Foa et al., 1997), the IES-R provided assessment of PTS symptoms with 17 items (as opposed to 49 in the PDS). The MBI has demonstrated excellent psychometric properties, and the version used (MBI-HSS) is specifically focused on responses of burnout occurring within professions involving contact with other people (e.g., healthcare services). The SDS is a short, highly validated measure of perceived impairment. The EC subscale of the IRI was included as a brief (7 items) measure of empathy relating to other people. The IRI conceptualises empathy as a set of related, yet distinct, constructs. For this reason it was possible to use just the EC subscale to specifically assess an aspect of empathy that was theoretically associated with vulnerability to trauma; the tendency to experience compassion for others. Piloting of the measurement booklet indicated that the IES-R, MBI, SDS and EC subscale were acceptable for a midwifery population.

Rationale for using the World Assumptions Scale was informed through piloting and consideration of the theoretical response to indirect trauma implicated in VT. The Trauma

and Attachment Belief Scale (TABS) was initially selected to assess cognitive disruption as this measure was specifically developed to assess VT. Piloting indicated that the TABS was too long (84 items in total) and inappropriate for a practitioner population; some items related to self-harm and a perceived ability to harm recipients of care. An options appraisal of alternative measures for cognitive beliefs associated with disruption within the theory of VT identified a small number of scales. The Posttraumatic Cognitions Inventory (PTCI; Foa, Ehlers, Clark, Tolin & Orsillo, 1999) was a viable, psychometrically valid option. However, the focus of items primarily related to direct experience of trauma. Use of one subscale (“negative cognitions about the world”) would be applicable to this study, however additional measures for cognitions about the self and other people would still be required. The World Assumptions Scale (Janoff-Bulman, 1989) was identified as a suitable, shorter and psychometrically valid substitute that enabled measurement of general cognitions about the self, world and other people.

Table 2.1 Measures and questions included in the postal survey

Measure	Author (Date)	Measuring	Associated constructs	Items (scales)
Demographic	Devised for the purpose of the research	Demographic variables	Age, gender, ethnicity, marital status Education (highest midwifery-related qualification) Previous/current mental health Parity	8
Work-related Questions	Devised for the purpose of the research	Employment and professional experience	Years' experience since qualified Employer & Pay Band Professional designation Current practice status Avoidance of clinical areas/situations Time off work Intent to leave	13
Experience of trauma	Devised for the purpose of the research	Exposure to trauma	Personal childbirth trauma (Y/N & description) Personal general trauma (Y/N & description) Frequency of exposure to and nature of traumatic perinatal events Description of a traumatic perinatal event Perceived impact of traumatic perinatal event exposure (Y/N & description)	7
Impact of Events Scale – Revised (IES-R)	Weiss and Marmar (1997)	PTS symptoms	Intrusion Avoidance Arousal	22 (3)
World Assumptions Questionnaire (WAS)	Janoff-Bulman (1989)	Worldview Beliefs	Benevolence of the world Meaningfulness of the world Self-worth	32 (3)
Maslach Burnout Inventory (MBI)	Maslach (1996)	Burnout	Emotional exhaustion Depersonalisation Reduced personal accomplishment	22(3)
Interpersonal Reactivity Index (IRI)	Davis (1980)	Empathy	Empathetic concern	7 (1)
Sheehan Disability Scale (SDS)	Sheehan (1983)	Perceived impairment	Impairment to work, self, and home functioning.	3 (1)

2. Section 2. Interview Study (Study 2)

The interview study was conducted with a subsample of midwives from the postal survey in order to explore their experiences of the event perceived as traumatic in greater detail. Recruitment for the interview study began with a letter placed at the end of the postal survey. This letter introduced the interview study and asked midwives to provide their contact details if they would be interested in receiving further information. Midwives providing their contact details formed the initial sampling pool.

2.1. Design

A semi-structured telephone interview study was conducted.

Ethical Approval

Ethical approval was obtained simultaneously with the postal survey (section 1).

2.2. Procedure

2.2.1. Recruitment of Participants

The procedure for recruitment took part in two stages. The first stage involved placement of a letter in the postal survey (study 1, see appendix A3). This letter provided an introduction to the study and asked midwives to provide their contact details if they would like to be contacted with further information. A third of midwives taking part in the postal survey ($n=134$, 33%) provided their consent to be contacted about the interview study.

The second stage of recruitment involved the researcher contacting consenting participants by telephone. Details of the study's aims and requirements for participation were explained to the participant. Where participants verbally consented to take part, an appointment was made for the telephone interview. No participant declined to take part upon being contacted.

Upon initial contact with participants midwives were fully informed about the aim and purpose of the interview study and what was required to take part. A verbal information sheet was used to standardize the information provided to participants within the study (appendix A7). Participants also received an information sheet with details of the study and the author's contact details if they took part in the study (Appendix A8).

Personal details of participants were kept confidential and transcripts were anonymised using code numbers. The content of transcripts was reviewed and any reference to names, places of work or specific ward names were removed. Details of events that were also

potentially threatening to the participant's anonymity (i.e., description of unique or unusual circumstances) were removed. This was informed either by a participant raising concerns about detail(s) during the interview or through researcher discretion.

Due to the nature of the interview topic care was taken to prevent participants experiencing any unnecessary distress when recalling their experience. Participants were reminded of their right to withdraw, pause or change focus of the interview. No interview was terminated early. Participants were asked to contact the appropriate sources of support should they feel distressed after taking part in the interview. Where this was inappropriate or unavailable, participants were asked to contact the researcher where additional sources of input could be outlined. No participant contacted the researcher after taking part in an interview.

2.2.2. Selection of participants for interview

A selection criterion was implemented using midwives' responses from the postal survey, and used to inform the second stage of recruitment. Two types of responses on the questionnaire were of primary focus. The first was the level of current posttraumatic stress symptomatology reported by midwives, indicated by scores on the IES-R. This was operationalised using a cut off of ≥ 34 and above to denote high PTS, and ≤ 33 to denote low PTS. The second was the extent to which the individual felt areas of their life (work, home, social) were affected as a result of experiencing a traumatic perinatal event, indicated using the SDS. This was operationalised using a cut off of ≥ 5 on each subscale to denote high impairment, and ≤ 4 on each subscale to denote low impairment.

Using this criterion, three groups were formed; high distress (high PTS, high impairment), low distress (low PTS, low impairment) and mixed distress (high PTS, low impairment). Nearly 75% ($n=100$) of midwives providing their consent to be contacted fulfilled one of these criteria. Scores for 26 participants corresponded to the high distress criterion and scores for 66 participants corresponded to the low distress criterion. Scores for 8 participants corresponded to the mixed distress group criterion. Strategy for recruitment included contacting participants with the greatest scoring (HH) or lowest scoring (LL) first to maintain the largest distance from the cut off for each group.

Forty-four midwives were initially recruited and interviewed about their experiences of traumatic perinatal events. This corresponded to 19 midwives in the high distress group, 20 midwives in the low distress group and five midwives in the mixed distress group. However, the mixed distress group was excluded from final analysis, as the small sample size limited the cohesion in midwives' descriptions, which limited the utility of findings. One participant

originally recruited into the low distress group was also excluded from analysis as their event had taken place whilst they were still a student. Therefore, a total of 35 participants were included in the final analysis, with 16 in the high distress group and 19 in the low distress group.

2.3. Data collection

Semi-structured, one-to-one telephone interviews of up to one hour were conducted between August and December 2012. All interviews were digitally recorded with the participant's consent and transcribed ad verbatim. Audio files were transcribed ad verbatim between December 2012 and January 2013. Analysis of interviews took place between March and August 2013.

2.3.1. Interview Guide

An interview guide was devised to structure the investigation (appendix A9). The guide was designed to cover four main sections; characteristics of the event, perceived response and impact, supportive and helpful strategies and reflection of change over time. The interview guide was piloted with three midwives (one HH, two LL). Following this, an amendment was made to repeat the criteria for a traumatic perinatal event immediately prior to commencing the interview. This was to ensure that described events fully reflected the operationalized definition. Pilot interviews were not included in the final analysis.

2.4. Analysis

Transcripts were analysed using template analysis, which is a method of organising and thematically analysing qualitative data (Crabtree & Miller, 1999; King, 2012). Template analysis is a derivative of thematic analysis for the coding and interpretation of text. Template analysis is a methodology that can be flexibly applied to different epistemological positions, and it is particularly useful when working with large amounts of qualitative data (King, 2004). For this reason it was considered to be an efficient method of identifying commonalities and themes within the large body of interview data collected for this study.

As the aim of the interview study was to report the perceived experience of events that were considered traumatic by midwives, the associated impact and how this changed over time, and the experience of helpful or supportive strategies, there was an intention to interpret midwives' experiences in order to generate an explanation that extended findings from the postal survey. The study adopted a framework of limited realist ontology with an interpretivist epistemology. A realist ontology stance to qualitative research accepts the presence of 'true knowledge,' but also accepts that there are possible alternative perspectives to be held about the world (Maxwell, 2012), thus adopting aspects of positivist ontology

(i.e., there is 'true knowledge' to be obtained) and constructivist epistemology (i.e., understanding of the world is a construction of perspective; Creswell, 2007). A constructivist epistemology, sometimes referred to as *interpretivism*, accepts that there is no 'true reality,' but that an individual constructs their view of reality through their social, historical and contextual situation, and that interpretation of these can provide insight into people's experiences (Crabtree & Miller, 1999; Creswell, 2007). Research grounded in constructivism therefore builds theory about the experience of a particular phenomenon through the interpretation of meanings held by individuals (Crabtree & Miller, 1999). Midwives' reports within interviews were considered to provide an insight into the experience of a traumatic perinatal event. However, it was assumed that these perspectives are constructed from midwives' personal, social and contextual circumstances. Therefore there was a degree of interpretation around the perceived experiences of midwives, with consideration for their social context, and also for the role of the researcher in the development of understanding.

2.4.1. Development of the template

Template analysis involves the use of an initial 'template' of a priori codes, which are used to initially organise codes from the data. A priori codes can be amended, deleted or merged as appropriate throughout the analysis process. Therefore, whilst the initial coding is in part guided by the template, the analysis process involves a process of iteration between codes, the text, and the research question. The initial coding template was informed by the interview schedule, and included four main codes for: event characteristics, initial responses and impact of the event, supportive or helpful aspects and reflective comments.

Analysis of all interviews began with close reading of the text and preliminary coding. Preliminary codes were organised using the template, in terms of their reference to event characteristics, initial responses and impact of the event, supportive or helpful aspects, or reflective points. Interviews were initially free coded within their respective symptom group.

This guided initial analysis into the temporal sequence of event exposure, response, impact, recovery and reflection. The template was developed through an iterative process of discussion between the researchers and supervisors. Emergent patterns across interviews were identified, and codes merged or amended accordingly. Discussion of the template involved close work with the text and the development of a hierarchy of themes. Four iterations of the template were conducted before it was established. This template provided a framework for the explanation of findings across both the high and low distress groups.

The penultimate template for the HH provided a framework on which to compare and contrast themes from the LL group. This was not to shape the analysis of the LL selection group data, and preliminary coding and grouping of themes had already taken place to control for this. However the HH template provided a basis of comparison in the experiences of midwives with the different response profiles. Throughout the analysis process, the four main template sections were not amended. The first template with codes from both groups is provided in the appendix (A10).

2.4.2. Quality control

The final template was developed through discussion with the supervisory team, who were experienced in conducting and analysing qualitative research. Themes were developed through discussion and comparison against text references. In total, four iterations of the template were completed before the final template was produced.

Reflexivity in qualitative research acknowledges the potential for the interviewer's personal and social disposition to impact upon the interpretation of data (Finlay, 2002; King, 2012). The process of reflexivity begins prior to data collection and involves the researcher considering their own experiences, assumptions, interests and beliefs in the research topic and how these may impact upon data collection and inference stages (Finlay, 2002).

The researcher was a Psychology postgraduate student with no personal experience of childbearing. It was possible therefore that the researcher may not identify implicit aspects of the childbearing and birthing process. However, it could also be argued that the researcher would not be biased by their personal experiences in their interpretation of the data. The researcher was not a midwife, with limited understanding of midwifery-specific language and medical terminology. The participant (who was aware of the researcher's background) may feel they have to explain more than usual certain aspects of their experience, and this could detract from the focus of their account. Having completed an extensive literature search on the potential impact of indirect trauma exposure, the researcher was aware of certain themes that may arise throughout the interviews. Therefore, there was a potential for this to bias interpretation of data by focusing on aspects already known to occur. However, this was managed by adopting clear focus throughout the interview process; that the main aim was to explore the nature of midwives' experiences from their perspective. Therefore, existing knowledge would complement findings rather than inform them.

A further source of researcher bias could have occurred during the data interpretation process, as the researcher could not be blinded to the symptom group of each participant.

This could lead to increased focus on symptomatology in the high distress group, and an oversight of symptomatology in the low distress group. However, this was managed by ensuring that preliminary coding reflected all aspects of participants' experiences, and by seeking disconfirmatory evidence for each theme.

CHAPTER 3. Midwives' experiences of traumatic perinatal events: Symptom prevalence, symptom structure and associated factors (Study 1a)

1. Overview of aims and hypotheses

1. To report the proportion of midwives reporting symptoms of traumatic stress, and the mean values at which these occur.

- 1.1. There will be an association between worldview beliefs and symptoms of posttraumatic stress.
- 1.2. There will be an association between the perceived impairment of traumatic perinatal events and posttraumatic stress symptomatology and worldview beliefs.

2. To investigate whether, and how, the nature of exposure (witnessing, listening to) to a traumatic perinatal event relates to different traumatic stress responses.

- 2.1. There will be a difference in the levels of posttraumatic stress symptomatology and worldview schema reported by participants with different types of exposure (witnessed, listened to, or both) to traumatic perinatal events.

3. To examine the predictive utility of variables identified as associated/predictive of traumatic stress symptomatology.

- 3.1. The extent of experience in the profession (years since qualified) will predict PTS symptomatology and worldview schema.
- 3.2. Higher levels of empathic engagement will predict PTS symptomatology and worldview schema following exposure to traumatic perinatal events.
- 3.3. The total number of traumatic events experienced will predict PTS symptomatology and worldview schema.
- 3.4. Personal trauma history (not related to childbirth) will predict PTS symptomatology and worldview schema following traumatic perinatal event exposure.
- 3.5. Personal experience of childbirth trauma will predict PTS symptomatology and worldview schema following traumatic perinatal event exposure.
- 3.6. The extent of exposure (witnessed and heard, or witnessed or heard only) will predict PTS symptomatology and worldview schema.

4. To investigate whether, and how, traumatic stress responses predict levels of burnout.

- 4.1. The severity of posttraumatic stress symptomatology will be associated with each of the burnout responses (emotional exhaustion, depersonalisation and personal accomplishment).
- 4.2. Worldview schema will be associated with each of the burnout responses (emotional exhaustion, depersonalisation and personal accomplishment).

- 4.3. PTS symptomatology will predict EE, DP and PA.
- 4.4. Worldview schema will predict EE, DP and PA.
- 5. To factor analyse reported symptoms of traumatic stress and burnout to investigate any underlying patterns of response.**

2. Results

2.1. Data cleaning

Treatment of missing data

Data were screened for missing items using the missing values analysis (MVA) in SPSS. Missing data were treated in one of two ways; participant exclusion or item replacement. Where participants had missed all or $\geq 20\%$ of one measure, responses for the measure were exempt from analysis. Eighteen participants missed $\geq 20\%$ of scores across or within one of the measurement scales. This led to different sample sizes across different analyses; however, *N* values are reported to signify this.

Where participants had missed a small amount ($\leq 20\%$) of items within one measure, probable values were replaced using estimation methods. This applied to only a small proportion of missing items ($n=51$) across all outcome measures (0.2% of all 36,206 items). Eyeballing the data revealed that missing items fell into no observable pattern. MVA tests on SPSS to statistically inspect randomness were not viable given the small amount of missing data. When less than 5% of items are missing within a (large) dataset, procedures for handling or estimating the missing data produce similar results (Tabachnick and Fidell, 2005, p. 62). Given the small percentage of missing items within this dataset, estimated replacement using expectation maximization (EM) was used.

EM produces an estimation of a missing value for a participant by using an iterative process of expectation and maximisation. The assumption of a normal distribution is used for the partially missing data to produce an estimate for the missing value based on the likelihood of the value falling under that distribution (Tabachnick & Fidell, 2005). EM was performed using SPSS MVA for each subscale of the IES-R, MBI and WAS separately with a maximum of 25 iterations. EM does not take into account the standard error of the dataset. This can mean that analyses using the estimated values produce biased results, as smaller standard errors increase the likelihood of significant results. For this reason, inferential analysis using datasets with EM imputed values is often discouraged (Graham, 2003). In order to assess the impact of EM methods on the overall dataset, mean values for each subscale were compared to the mean values for the original subscales with missing values. Differences were minimal (e.g., 0-0.2 units difference in mean scores). Standard deviations

of subscale scores were also minimally altered, with only a 0.2 unit difference where identified. Therefore EM was accepted to have provided a method of estimating missing values, without substantially biasing or altering the overall scores, whilst enabling full use of available values.

Transformations

The distributions of outcome variables per analysis were checked for normality by observing histogram plots and calculating skewness and kurtosis. According to Shapiro Wilk analyses, scores were significantly non-normally distributed. However, significance tests for normality may be more likely to return a significant result on large datasets (Tabachnick & Fidell, 2007) and therefore this result may be overly conservative, and best disregarded in favour of observing distribution plots and skewness values. Kurtosis scores were not used to indicate normality, as the underestimation of variance due to positive or negative values “disappears” with samples of 100 and 200 cases respectively (Tabachnick & Fidell, 2007, p. 80). As this sample has in excess of 400 cases, it can be inferred that the kurtosis statistics are unlikely to make a negative impact on analysis.

There was evidence of non-normally distributed scores across all subscales. Square root transformation improved the distribution of values, indicated by the reduction in skewness and the improvement of distributions in histogram plots. However, it is suggested that parametric tests are more robust to violations of normality when conducted on large sample sizes. The total sample is large ($n=421$) and therefore analysis was conducted on both transformed and non-transformed data. There was no difference in the significance of any analysis, and minimal differences in the magnitude of differences and associations. For this reason analysis is presented on the non-transformed data.

2.2. Participants

Four hundred and sixty-four questionnaires were returned (17% response rate). Six questionnaires were returned blank. Three were returned by retired midwives and subsequently excluded, as it was unclear for how long these midwives had been retired. Thirty-four midwives returned the questionnaire but had never experienced a traumatic perinatal event and were not included in any further analyses. The final sample consisted of 421 qualified midwives. All midwives were registered with the Royal College of Midwives and currently working (or had worked at least up to the month prior to completing the questionnaire) in a midwifery-related role. Current work in clinical practice was not a requirement of the sample, as all qualified midwives had previous experience working within a clinical area. All midwives within the final sample had experienced at least one

traumatic perinatal event whilst working as a midwife, throughout their qualified career to date.

2.3. Demographic details and sample characteristics

Demographic details including age, gender, marital status, education and parity are presented in Table 3.1. Respondents were predominantly female ($n=420$, 99.8%), aged between 22 and 68 years ($M=45.04$, $SD= 9.85$ years). The highest proportion of the sample was aged between 45 and 54 years ($n=184$, 44%). The majority of participants were married or cohabiting ($n=328$, 78%). The remainder were single ($n=50$, 12%), divorced or separated ($n=35$, 8%), or widowed ($n=4$, 1%).

There was a variation in the highest midwifery-related educational attainment reported by midwives within the sample. The largest proportion of midwives had obtained a Bachelor's degree ($n= 172$, 41%). Others reported obtaining a Diploma or certificate ($n=102$, 25%), or a further degree such as a Master's or Doctorate ($n =29$, 7%). Twenty-two percent of the sample ($n=92$) reported that their midwifery qualification was their highest educational attainment.

The majority of the total sample were multiparous and had between one and three children ($n=294$, 70%). Of the midwives with children ($n=334$), the majority had given birth twice ($n=155$, 46%). A small percentage of the total sample had four or more children ($n=40$, 10%). Eighteen percent of the sample ($n=75$) were nulliparous.

Demographic data for midwives within the United Kingdom is limited. However, reports identify a predominantly female midwifery workforce (99.6%), aged on average between 42 and 43 years (NMC, 2009). When categorised, ages peak between 40-44 years (England and Scotland), 45-50 (Ireland) and 40-50 years (Wales; DOH, 2010). Therefore, participants in the present study were similar in terms of age and gender to midwives in the general UK population. Figure 2.1 displays categorised age frequencies for the present sample.

Forty one percent of all participants in this sample ($n=174$) had previously sought advice from their GP for issues relating to their mental health, and the majority of these ($n=171$) provided details of the source of input they had received. Over a third of participants who had previously sought advice from their GP had not been referred to a further source of input ($n= 63$, 37%). Others had received input from either a counsellor ($n=74$, 43%), a psychologist ($n=5$, 3%), a psychiatrist ($n=3$, 2%), a mental health nurse ($n=2$, 1%) or from

multiple sources of input ($n=21$, 12%). Percentages detailed here represent the subsample of midwives who sought advice from their GP about issues relating to their mental health.

Just over 8% of the total sample ($n=35$) were currently seeking input from their GP for issues relating to their mental health. Of those currently seeking input from a GP, just over 40% were currently seeing a counsellor ($n=13$, 42%). A smaller proportion was seeing a psychologist ($n=1$, 3%), psychiatrist ($n=1$, 3%), occupational health ($n=1$, 3%), or only their GP for medication ($n=1$, 3%). Table 3.2 presents further details about mental health history of participants,

According to statistical reports, approximately a quarter of British adults will experience at least one mental disorder, with one in six adults experiencing mental difficulties at any one time (Mental health foundation, MHF, 2007). Women are more likely to have received treatment for a mental health related issue compared to men (29% vs. 19%) (MHF, 2007). The percentage of midwives seeking support from their GP for issues relating to their mental health within this sample was higher than the national average. However, the sample was predominantly female and so this may have contributed to a higher proportion of individuals seeking advice from their GP.

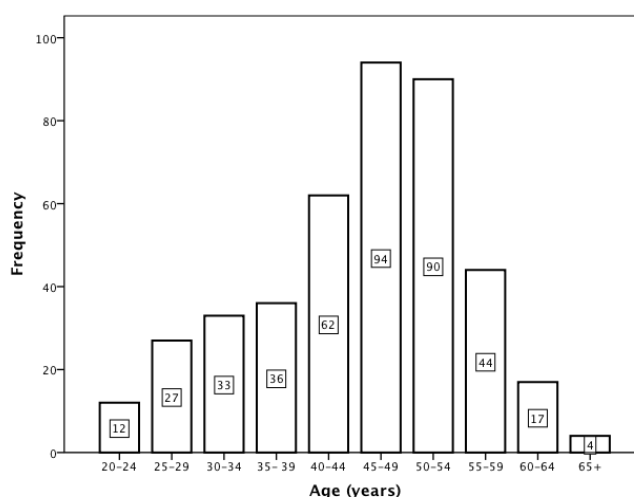


Figure 2.1 Distribution of age (years) in midwives in the postal survey

Table 3.1 Personal characteristics of midwives within the postal survey

		Mean	SD	Range
Age (years)		45.04	9.85	22-48
Characteristics	Subcategory	N	%	
Gender	Female	420	99.8	
	Male	1	.2	
Education	Bachelor's	172	40.9	
	Diploma/ Cert.	104	24.6	
	RM/ SCM	92	21.8	
	Master's/ Doctorate	29	6.9	
	Advanced/ Specific	4	1.0	
	Other	12	2.9	
	Missing	8	1.9	
Marital Status	Married/ Cohabiting	328	77.9	
	Single	50	11.9	
	Divorced	35	8.3	
	Widowed	4	1.0	
	Other	3	.7	
	Missing	1	.2	
Parity	0	75	17.8	
	1	60	14.3	
	2	155	36.8	
	3	79	18.8	
	4+	40	9.5	
	Missing	12	2.9	

Table 3.2 Current and previous mental health history of midwives

		N	%
Previously consulted GP:	Yes	174	
<i>Previous source of input:</i> (n=171)	Counsellor	74	43.3
	No referral	63	36.8
	Multiple	21	12.3
	Missing	3	1.8
	Psychologist	5	2.9
	Psychiatrist	3	1.8
	MH Nurse	2	1.1
Current seeing GP:	Yes	35	
<i>Source of input:</i> (n=30)	Counsellor	13	37.1
	GP/	11	31.4
	Medication		
	Multiple	2	5.7
	Psychologist	1	2.8
	Psychiatrist	1	2.8
	Occ. Health	1	2.8
	No referral	1	2.8

Professional designation

Midwives had been qualified from between six months to 44 years ($M= 17.28$, $SD= 10.48$). The majority of midwives within the total sample were employed by the National Health Service (NHS, $n= 397$, 94.3%). Other sources of employment included University establishments ($n=7$, 2%), multiple employment ($n=4$, 1%), working privately ($n=3$, 0.7%), being self-employed ($n=1$, 0.2%), unemployed ($n=1$, 0.2%) or working for charity ($n=1$, 0.2%). Employment characteristics are presented in Table 3.3.

The majority of the total sample were working at band 6 level ($n=272$, 65%). Others were working at band 7 ($n=108$, 26%), band 5 ($n=9$, 2%) or band 8 and above ($n= 16$, 4%). Nine (2%) midwives did not provide details about their band status and seven reported that they worked within a University institution (2%). Of the seven midwives employed by a University institution, five worked as a senior lecturer, one as a lecturer, and one held an honorary position.

Details regarding the professional designation of participants, and the areas of practice, are presented in Table 3.3. Midwives reported a variety of professional designations, including hospital ($n=239$, 57%), community ($n=112$, 27%), team midwifery ($n=42$, 10%), integrated practice ($n=32$, 8%) and consultant roles ($n=1$, 0.2%). Some midwives were also involved in midwifery education ($n=11$, 2.6%) and research roles ($n=4$, 1%). Several midwives reported concurrent roles, and therefore percentages represented here are not mutually exclusive and instead represent the proportion of the total sample ($n=421$) reporting working in that particular professional designation.

Ninety-five percent of the sample were currently engaged in clinical practice on at least a monthly basis ($n=395$, 94%). The most frequently reported areas for current practice included labour and delivery care within a hospital environment ($n= 253$, 60%), practice within community settings and homebirths ($n= 146$, 35%), provision of antenatal care ($n= 133$, 31%), and postnatal care ($n= 128$, 30%). Some midwives were working in midwifery led units ($n= 24$, 6%), within specific ward environments unrelated to labour and birth ($n= 8$, 2%), or were rotated frequently and could not provide a main area of practice ($n=4$, 1%). Nine midwives (2%) were working on Special Care Baby Units. As before, many midwives reported were working in multiple areas of practice and so percentages reported here represent the number of midwives working within that area as a percentage of the total sample ($n=421$).

Table 3.3 Employment characteristics, designation and experience (years) in the profession (n=421)

		<i>N</i>	<i>Mean</i>	<i>SD</i>	<i>Range</i>
Experience (years) in the profession	Total	418	17.28	10.48	.5-44
	Full time*	363	10.11	8.01	1-38
	Part time*	272	11.57	8.39	.5-39
		<i>N</i>	<i>%</i>		
Employment	NHS	397	94.3		
	University	7	1.7		
	Multiple	4	1.0		
	Private	3	.7		
	Other	9	2.1		
	<i>Missing</i>	1	.2		
Professional Designation ¹	Community	112	26.6		
	Hospital	239	56.8		
	Integrated	32	7.7		
	Team manager	42	10.0		
	Educator	11	2.6		
	Consultant	1	.2		
	Research	4	1.0		
	Other	53	12.7		
	<i>Missing</i>	1	.2		
NHS Band (<i>n</i> =405)	5	9	2.2		
	6	272	63.6		
	7	108	25.4		
	8a - d	16	5.2		
Institutional Role (<i>n</i> =7)	Senior Lecturer	4	1.0		
	Lecturer	1	.2		
	Senior lecturer/ practitioner	1	.2		
	Honorary	1	.2		
	<i>NA/ missing</i>	9	1.6		
Clinical Practice	Yes	395	93.8		
	No	24	5.7		
	<i>Missing</i>	2	.5		
Area of practice*	Labour Ward	253	60.1		
	Community	146	34.7		
	Postnatal	128	30.4		
	Antenatal	132	31.4		
	SCBU	9	2.1		
	Other	40	9.5		

*full time and part time work frequency was not mutually exclusive

¹percentages are not mutually exclusive

Personal Trauma History (unrelated to childbirth)

Forty-three percent ($n=183$) of midwives within the sample had personally experienced a traumatic event that fulfilled criterion A of the DSM-IV for PTSD (APA, 2000). That is, 183 midwives had experienced an event where that either themselves or somebody else was at risk of serious injury or death, and where they had experienced a sense of fear, helplessness or horror in response. Events included within this statistic do not include instances of traumatic perinatal events experienced whilst providing care to women, or instances of personally traumatic childbirth.

This percentage is similar to the prevalence of traumatic event exposure identified within community samples, particularly when comparing to female respondents of a similar age. A large survey of adult psychiatric morbidity conducted within the UK reported that 42% of adults had experienced a traumatic event in their lifetime (Health and Social Care Information Centre, HSCIC, 2009). Furthermore, 44% of female respondents aged between 45 and 54 years had experienced a traumatic event. A traumatic event was defined as a situation where the individual feared for their own (or someone else's) safety. Therefore the criterion for a traumatic event within this study was based on, but did not directly replicate, the criteria for a traumatic event for PTSD in the DSM-IV. Additional studies conducted in the USA and Canada report similar prevalence for lifetime traumatic experience. Studies conducted with community samples report that between 50- 74% of women (Kessler et al., 1995; Resnick et al., 1993; Stein et al., 1997) and 60- 80% of men (Kessler et al., 1995; Stein et al., 1997) have experienced a traumatic event in their lifetime. These percentages are slightly elevated in comparison to those reported by midwives within this study.

Personal experience of traumatic childbirth

Of the 340 parous midwives, nearly a quarter ($n=83$, 24%) perceived at least one of their experiences of childbirth to be traumatic. This percentage is lower than studies investigating the proportion of mothers experiencing childbirth as traumatic. Alcorn et al. (2010) reported that 46% of women within their sample perceived their childbirth to be traumatic, using the DSM-IV-TR criterion A for a traumatic event PTSD as a definition. An additional study in the USA found that 34% of women (total $n=215$) perceived their experience of birth to be traumatic (Soet, Brack & Dilorio, 2003). An earlier study reported that 20% of a (smaller) sample of women perceived their experience of obstetric and gynaecological procedures to be traumatic (Menage, 1993). A review study identified that around a third of mothers (33%) experience their childbirth as traumatic, and that 25-30% report symptoms of PTS at six weeks postnatally (Olde et al., 2006). This proportion diminishes over time, with 3-6% reporting symptoms at 6 weeks, and nearly 2% reporting symptoms after 6 months. Whilst

symptomatology following traumatic childbirth was not assessed within this study, the percentage of midwives with a personal experience of childbirth was slightly lower than that reported in the wider literature.

Of the parous midwives with a personal experience of traumatic childbirth ($n=83$), over 80% ($n=66$) felt that this personal experience had impacted on their work as a midwife. Most of these ($n=65$) provided a short description of the way in which their work had been effected. These descriptions were thematically analysed for the nature of their content, and organised into two broad categories: descriptions where the effect on work was beneficial (they felt that their work was more effective due to their own experience of traumatic birth), and descriptions where the effect on work was adverse or negative. From the categorisation of descriptions provided by midwives, the nature of this impact was largely positive in nature (see Table 3.4 for examples and frequencies).

Table.3.4 Personal experience of traumatic childbirth: perceived impact on practice ($n=65$)

Nature of effect	<i>n</i>	Example
Positive or beneficial effect to work	55	<i><u>Empathy and understanding of feelings</u> of parents in that or similar situations. Always a positive effect thankfully. [ID 354]</i> <i><u>Improved my communication</u> with women [ID 416]</i>
Negative or adverse effect to work	5	<i>I had a poorly functional epidural for an emergency C/S. I felt everything. This made it <u>difficult to focus for a few months</u> on return to work, particularly when taking women to theatre. [ID 16]</i> <i>During delivery of my daughter she needed intense resus and I lost 2 litres of blood. <u>Found resus of infants difficult brought flash backs</u>. [ID 384]</i>
Both positive/beneficial and negative/ adverse	5	<i>My third baby was born by class 1 EmLSCS due to brady [sic] and clinical negligence meant a long recovery. First baby was a TOP for cardiac abnormalities. <u>More empathy but also less confidence in normality</u>. [ID 399]</i> <i>Similar cases to my deliveries <u>evoke memories</u> - I also have <u>more sympathy and empathy</u>. [ID 207]</i>

2.4. Experience of traumatic perinatal events

All midwives included in the analysis for the survey had experienced a traumatic perinatal event at least once whilst working as a midwife to date ($n=421$). Four hundred and two midwives (95% of the total sample) had witnessed a traumatic event. Three hundred and eighteen (76% of the total sample) had listened to a traumatic perinatal event. There was a degree of overlap however, with 299 (71%) midwives having both witnessed and listened to a traumatic perinatal event. Nearly a quarter of the total sample ($n=103$, 24%) had only ever witnessed a traumatic perinatal event, and five percent of the sample ($n= 19$, 5%) had only ever listened to a traumatic perinatal event. As presented in Figure 3.1, a substantial majority of the sample reported both witnessing and listening to traumatic perinatal events.

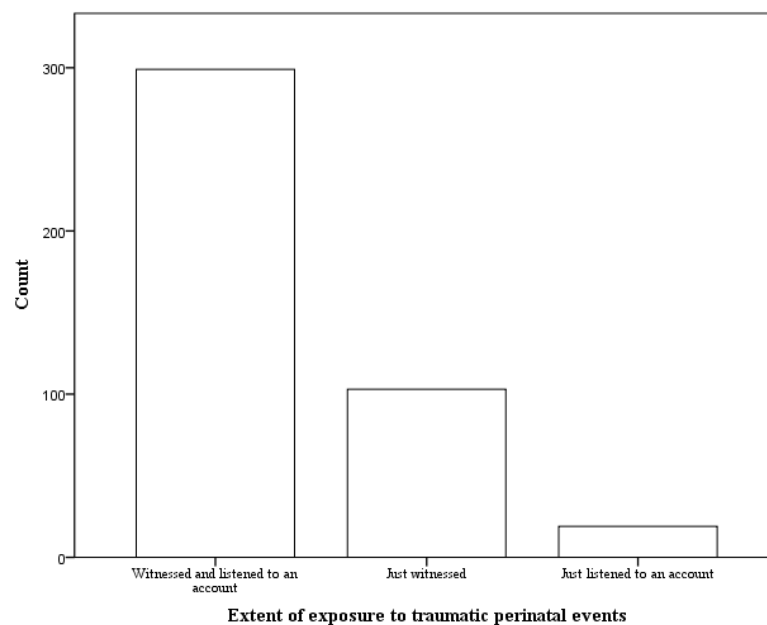


Figure 3.1 Frequency of midwives experiencing traumatic perinatal events through witnessing and listening to accounts, just witnessing events, and just witnessing accounts ($n=421$)

Frequency of traumatic perinatal event exposure

Participants were asked to provide a best estimate for the number of traumatic perinatal events witnessed and/or accounts listened to and perceived as traumatic, throughout their qualified career and within the last 5 years. Several midwives were unable to estimate a numerical frequency of their event exposure, and for that reason the descriptive statistics are presented here with differing total sample sizes.

Midwives had witnessed on average 7 traumatic perinatal events throughout their career to date ($M= 6.63$, $SD= 9.93$, $n=408$). Over the last 5 years, the average number of traumatic perinatal events witnessed was just under 3 ($M=2.66$, $SD= 3.22$, $n=397$). Midwives had also

encountered on average 14 traumatic perinatal events through listening to the experiences of women in their care throughout their career ($M= 14.00$, $SD= 25.01$, $n=340$). Within the last five years midwives had listened to an average of just over 7 traumatic perinatal events ($M= 7.02$, $SD= 14.19$, $n=360$). Therefore, on average, midwives had encountered more traumatic perinatal events through listening to accounts from women in their care both overall and within the last 5 years.

Perceived impact of traumatic perinatal event exposure

Table 3.5 presents the frequency of participants that considered changing their professional allocation, taking time off or leaving the profession following traumatic perinatal event exposure. A high percentage ($n=323$, 77% of the total sample) of midwives felt that their professional experiences of traumatic perinatal events had impacted on either themselves or their work. A quarter of these midwives ($n=82$) believed that their experiences of traumatic perinatal events had positively impacted on themselves or their work, and 9% ($n=28$) felt that their experiences had only had an adverse effect on themselves or their work. Sixty-six percent ($n=213$) felt that their experiences had impacted in both positive and adverse ways.

Twenty percent of midwives ($n=82$) had changed professional allocation on a short term basis following their experience of traumatic perinatal events, and slightly less ($n= 57$, 14%) had changed their allocation on a long-term basis. Just over 10% of midwives ($n=50$, 11.9%) had taken time away from employment after witnessing or listening to an account of a traumatic perinatal event that had occurred to a woman in their care. Over a third of the sample had seriously considered leaving the midwifery profession following a traumatic perinatal event, again experienced whilst providing care to women ($n=148$, 35.2%). This suggests that, although midwives were reluctant to change allocation or have time away from work after a traumatic experience at work, a significant proportion of the sample had considered leaving the profession.

Table 3.5 Response frequencies for questions on impact of traumatic perinatal events on work (n=421)

“Have you ever...”		N	%
Changed Allocation Short term?	Yes	82	19.5
	No	307	72.9
	Considered	31	7.4
	Missing	1	0.2
Changed Allocation Long term?	Yes	57	13.5
	No	350	83.1
	Considered	14	3.3
	Missing	0	0
Taken time off due to traumatic event experience?	Yes	50	11.9
	No	342	81.2
	Considered	27	6.4
	Missing	2	0.5
Considered leaving due to traumatic event experience?	Yes	148	35.2
	No	271	64.4
	Missing	2	0.5
Do you feel your experience of traumatic perinatal events has had an effect on yourself, or your work life?	Yes	323	76.7
	No	63	15.0
	Missing	35	8.3

Midwives provided a short description of the nature of this impact, and whether this was beneficial or negative. Over 50% of the sample perceived their experience of a traumatic perinatal event to have had both a beneficial and an adverse impact on their personal or professional life ($n=213$, 51%). Twenty percent felt that their experience had only impacted upon them in a beneficial way ($n=82$, 20%), and seven percent felt that the nature of impact was only adverse ($n=28$, 7%). Nearly 300 ($n=295$) descriptions of beneficial impacts and 239 descriptions of adverse impacts were provided by midwives and thematically analysed to identify commonalities across the dataset (Braun & Clark, 2006). Five themes for beneficial impacts and six themes for adverse impacts were reported. Descriptions could correspond to multiple themes simultaneously, and therefore the number of descriptions included in each theme (shown in brackets next to the theme subheading) is not mutually exclusive.

Perceived beneficial effects

The majority of midwives ($n=307$) described a beneficial impact of their traumatic perinatal event experience on either their personal or professional life. Descriptions corresponded to five themes, relating to an increase in reflective practice, learning from the event and

improving practice, increased confidence in practice, an improvement in ability to support others, and an increased awareness and understanding of the inevitability of traumatic perinatal events.

Reflecting on practice (n= 104)

The traumatic perinatal event encouraged midwives to self-reflect on their care or practice within the situation, and to consider whether they could have acted any differently. This is process of self-reflection sometimes informed changes to their practice.

- *“They make you reflect on your practice, as in would I have done it that way” [ID 6]*
- *“To look at my own professional standards and ways of improving/ updating.” [ID 149]*
- *“Reflection on how to support women/ help recognise/ prevent further events promptly.” [ID 433]*
- *“Makes me reflect on my practice and aim to maintain high standards” [ID 309]*

Learn from and inform practice (n= 90)

A perceived benefit of the traumatic perinatal event was that it represented a learning opportunity, where the experience highlighted aspects of care that could be changed or improved in order to prevent a subsequent occurrence or similar situation.

- *“All experiences are learning experiences” [ID 85]*
- *“Always learn from poor outcomes – practice changes and becomes better.” [ID 177]*
- *“Learn from your mistakes.” [ID 112]*
- *“Making sure notes are read carefully.” [ID 445]*

Increased confidence in practice (n= 77)

Some midwives felt that their experience had increased their confidence in practice. This was influenced by receiving positive feedback from others about their practice, or because the event reiterated to them that they were able to successfully manage situations that they perceived to be traumatic. Sometimes this confidence was also focused on their interpersonal relations at work, improving confidence in to asserting themselves within the workplace.

- *“Boosted my confidence as my clinical practice was of a high standard” (ID 13]*
- *“Followed my instinct and observations” [ID 405]*
- *Improved confidence in my ability to deal with emergencies + family members etc.” [ID 392]*
- *“I am less likely to allow colleagues to ‘bully’ me or ignore me” [ID 371]*

Improves ability to support others (mothers, colleagues) (n=43)

Midwives also specifically referred to an increased ability to support midwives, and sometimes colleagues, during traumatic perinatal events. Midwives felt that their experienced improved their ability to empathise with mothers, and to identify their support needs during a traumatic perinatal event. Reference to an ability to support colleagues was also identified, where midwives were aware of the importance of supporting others during a traumatic perinatal event. This was sometimes elicited by personally not feeling supported within a situation by colleagues.

- *“Vowed I would never treat a member of junior staff the way I was treated by senior member.” [ID 19]*
- *“Work alongside junior midwives more closely.” [ID 408]*
- *“Feel more supportive to staff in difficult situations. Understand mums more.” [ID 236]*
- *“Aids empathy.” [ID 366]*

Heightened awareness and acknowledgement (n=19)

Some midwives perceived an increased awareness about the potential for traumatic perinatal events to occur as a beneficial impact of their experience. Awareness related to knowing how suddenly some events can occur and the need for effective note-keeping, which translated into changes in their practice.. There was also an increased awareness about the inevitability of events occurring, and how they as a midwife can only do ‘so much’ to control some situations, which was a perceived benefit of traumatic perinatal event experiences for midwives.

- *“The longer you practice and the more you experience, you realise they could happen to ANY [underlined by participant] woman.” [ID 462]#*
- *“Sometimes – ‘sh*t happens.’ We are midwives not omnificent beings. We advocate and facilitate.” [ID 390]*

- *“Improving practice and confidence that you have experienced. Emergencies – less ‘unknown’ fear.” [ID 33]*
- *“Yes- always alert, improved record keeping.” [ID 62]*

Perceived adverse effects

A large number of midwives also provided an example of a perceived adverse effect of their traumatic perinatal event experience ($n= 239$). These related to a perceived loss of confidence in practice following the event, feelings of vulnerability in relation to investigative procedures, the event impacting negatively upon their personal life, difficulty experiencing responses and emotions associated with the event, and the general enduring nature of the memory for the event.

Loss of confidence ($n= 87$)

In direct contrast to theme 3 in the previous category of beneficial impacts, a proportion of midwives perceived their experience of a traumatic perinatal event to have adversely affected their confidence. This mainly related to their confidence in practice and could relate directly to similar subsequent occurrences, or their practice in general. Sometimes the loss of confidence related to feelings of fear or anxiousness when encountering a similar situation in the future.

- *“Less confident about pool births.”¹ [ID 125]*
- *“Loss of confidence. Questioning skills and practice. Feeling an ‘anxiety’ and doubt I didn’t have before.” [ID 144]*
- *“I still feel distress if baby needs resuscitation, but I’m working on it.” [ID 163]*
- *“Constantly worry about my care. Initially difficult to stop thinking about it all. It’s always at the front of my mind constant diagnosing my care.” [ID 11]*

Feeling vulnerable afterwards ($n= 57$)

Midwives reported feeling vulnerable after the event, in relation to their colleagues and the investigative procedures that ensued. This included feelings of blame, fear and losing confidence in their colleagues or managers.

- *“At the time of the investigation, felt very vulnerable, frightened.” [ID 36]*
- *“Loss in confidence --> SEVERE BLAME CULTURE” [capitals written by participant] [ID 105]*

¹ Event specifically related to an IUD during a pool birth situation

- *“Felt 'hunted' by obstetric staff looking for scapegoat.” [ID 399]*
- *“Don't believe in system. Know I am just a number they will get rid of through manipulation of facts. Power and hierarchy unreal in NHS.” [ID 78]*

Impact negatively upon their work (n= 53)

Some adverse impacts related primarily to midwives' work. Midwives reported practising defensively as a result of their experiences, and some elaborated on this to provide examples of increasing the implementation of interventions for mothers during childbirth. For some midwives, the traumatic perinatal event lead them to consider their future in midwifery, move roles in order to avoid clinical work, or express a general wish to leave their profession.

- *“Practising more defensively and in a more medically orientated way. Becoming frustrated and angry.” [ID 266]*
- *“I feel I may treat my patients as 'high risk' than they may actually be.” [ID 320]*
- *“Moved to a less clinically based role.” [ID 16]*
- *“I felt I wanted to leave midwifery.” [ID 361]*

Impacting upon personal life (n= 51)

The impact of the traumatic perinatal event sometimes extended beyond the work setting, and midwives' perceived their personal health or life in general to be adversely affected. Midwives reported adverse implications of events on their personal health, and an increased fear for similar occurrences affecting their own pregnancy. Midwives also reported feeling concerned about work-related events when at home.

- *“Stress, distress affecting personal life, mild depression and insomnia and anxiety loss of professional confidence.” [ID 66]*
- *“Practising in a different way, keeping my head down, I nearly lost everything including my family, on-going anxiety issues for me, my husband had a mental health crisis.” [ID 349]*
- *“Personally it affected my own pregnancies; I felt very nervous throughout and feared the need to be induced.” [ID 378]*
- *“Detachment becoming more of a dominant feature in life generally.” [ID 173]*

Experiencing adverse emotional responses (n= 22)

Some of the adverse impacts reported by midwives related to their experiences of associated symptomatology, or the way that they felt during or shortly after the events. The spectrum of emotional responses ranged from sadness and sorrow, to anger and frustration that the event occurred.

- “Sorrow.” [ID 53]
- “I am still angry and feel there has been no closure” [ID 69]
- “Nightmares, hearing mothers' scream in my sleep, initially compulsive constant washing my hands to get rid of the feel of the baby's dead skin.” [ID 128]
- “Had to have counselling, nightmares, flashbacks, avoidance of labour ward.” [ID 247]

‘Haunted’ by their experience (n= 11)

Midwives reported ‘never forgetting’ their experience as an adverse impact for them, with some reporting that they could clearly recall the event, and that it stayed on their mind. Some midwives reported ‘still’ feeling distressed about their experience, which is indicative of the perceived enduring impact that their traumatic perinatal experience had for them.

- *“Bad experiences never leave you they haunt you, they shake your confidence and it takes a long time to recover from the guilt.” [ID 358]*
- *“Traumatised for years by incident and no support from management.” [ID 237]*
- *“I am still traumatised by some previous events.” [ID 274]*

2.5. Examination of specific hypotheses

The following section will present findings relating to each aim and hypothesis presented at the beginning of the chapter. These broadly related to the prevalence of traumatic stress symptomatology, the association of response with exposure to traumatic perinatal events, the prediction of traumatic stress responses, the prediction of burnout syndrome, and an investigation into the symptom structure of PTS, VT and burnout. For each subsection, the relevant aim and hypotheses are stated, followed by a presentation of analysis and a summary of findings.

2.5.1. Prevalence of traumatic stress symptomatology

Aim 1:

To report the proportion of midwives reporting symptoms of traumatic stress, and the mean values at which these occur, following exposure to a traumatic perinatal event.

Posttraumatic Stress Symptomatology

Posttraumatic stress symptoms were measured using the Impact of Event Scale- Revised (IES-R, Weiss & Marmar, 1997). Higher scores denote a greater level of PTS symptomatology. Symptoms of intrusions ($M=12.74$, $SD= 7.65$), avoidance ($M=8.13$, $SD= 6.13$) and arousal ($M= 6.63$, $SD= 5.85$) were reported by midwives in relation to their experiences of traumatic perinatal events (see Table 3.6). The average total score across all three subscales was 27.49 ($SD= 17.84$). The IES-R is not intended as a diagnostic measure for PTS; however, it has been found to have some utility in identifying clinically relevant levels of symptomatology. A total score of 34 or above on the IES-R has been reported to predict clinical diagnosis of PTSD with sensitivity of 70%, specificity of 77%, PPV of 0.81 and NPV of 0.66 (Rash, 2008). Using this cut off approximately a third of midwives ($n=138$, 33%) were reporting symptoms of PTSD at frequencies that were potentially clinically relevant.

Carmel and Friedlander (2009) reported a mean total score on the IES-R of 12.49 ($SD= 11.82$) with a sample of therapists ($n=106$). This is much lower than the present sample average total score on the IES-R. Other studies of health professional groups indirectly exposed to trauma have identified symptoms of PTS using the Impact of Event Scale (IES), the predecessor to the IES-R that measures symptoms of intrusion and avoidance only. Some studies have reported average intrusion and avoidant scores that are greater than those reported within the present sample. For example, Way et al. (2004) reported average intrusive symptoms at 13.99 ($SD= 4.57$) and avoidant symptoms of 12.44 ($SD= 4.4$). Chemtob (1988) reported an average intrusion score of 21.0 ($SD=6.1$) and avoidance score of 7.6 ($SD=4.8$) in a large sample of psychologists ($n=365$). However the level of avoidant symptomatology here was lower than reported within the present sample. Other studies have reported lower average scores for intrusion and avoidance. Pearlman and Mac Ian (1995) reported an average intrusion of 7.57 ($SD= 4.3$) and avoidance of 7.33 ($SD=5.3$) in a smaller sample of therapists ($n=188$). Whilst these studies provide a basis of comparison for PTS symptomatology in health professionals indirectly exposed to trauma, inferences are limited by differences in the type and nature of exposure to traumatic events across professional groups. Comparison of IES-R scores to other studies with healthcare professionals is presented in Table 3.7.

There is a paucity of research investigating symptoms of PTS using the IES-R in midwives. Wallbank (2010) investigated midwives and doctors' experiences of miscarriage, neonatal death and stillbirth using the IES. Average scores of intrusion symptoms were 12.06 ($SD=8.31$) and avoidance were 10.20 ($SD= 7.61$). Overall baseline scores were reported at between 28.91 ($SD= 9.67$) and 29.18 ($SD= 10.85$) for two groups (one treatment, one non treatment) respectively (Wallbank, 2010). Comparisons between the intrusion and avoidance scores reported by Wallbank (2010) and the present midwifery sample identifies a similar level of intrusive symptomatology, and a slighter lower level of avoidance symptomatology in the present midwifery sample.

Table 3.6 Means, standard deviations and category interpretation for scores on the Impact of Event Scale-Revised (IES-R) (n=416).

Scale (items):	Range	Mean total score	SD	Mean item score	SD
Intrusion (8)	0-32	12.74	7.65	1.59	.96
Avoidance (8)	0-28	8.13	6.14	1.02	.77
Arousal (6)	0-24	6.63	5.85	1.10	.97
Total IES-R (24)	0-84	27.49	17.85	1.25	.81
Estimated Cut off:				<i>N</i>	% *
>34 total score				138	33.2%
<34 total score				278	66.8%

*denotes % of sample completing IES-R (n=416)

Table 3.7 Scores on the Impact of Event Scale (-Revised; IES- IES-R) reported by other health professional groups

	Measure	Intrusion	Avoidance	Arousal	Total
Chemtob (1988); <i>psychologists (n=365)</i>	IES	21.0 (6.1)	7.6 (4.8)	-	-
Pearlman and Mac Ian (1995); <i>therapists (n=188)</i>	IES	7.57 (4.3)	7.33 (5.3)	-	-
Sheehy Carmel et al. (2009); <i>therapists (n=106)</i>	IES-R	-	-	-	12.49 (11.82)
Wallbank (2010) <i>Midwives and doctors (n=30)</i>	IES	12.06 (8.31)	10.20 (7.61)	-	-

Way et al. (2004); <i>clinicians (n=347)</i>	IES	13.99 (4.57)	12.44 (4.4)	-	-
Present study; midwives (n=416)	IES-R	12.74 (7.65)	8.13 (6.14)	6.63 (5.85)	27.49 (17.85)

Worldview Schema

The world assumptions scale (WAS) was used to assess cognitive disruption to worldview schema relating to three primary areas; the world is benevolent, the world is meaningful, and the self is worthy (Janoff-Bulman, 1989). Endorsement is indicative of the degree to which the participant agrees with each statement or belief. Higher scores indicate greater endorsement, and represent more positive worldview schema. For participants completing the WAS ($n=418$), the average score for the benevolence of the world subscale was 37.65 ($SD= 5.61$; potential range 13- 48). Beliefs about the meaningfulness of the world were endorsed at an average of 34.00 ($SD= 7.21$, potential range 12-72). Beliefs about self-worth were endorsed at an average of 50.50 ($SD= 8.59$, potential range 12-72). Average scores are presented in Table 3.8.

Information on normative scores for the WAS are limited. However, scores provide a basis of comparison when investigating the nature of beliefs held by midwives who have been indirectly exposed to trauma whilst providing care. The WAS has been used to assess cognitive disruption following indirect trauma exposure in therapists (Van Minnen & Keijsers, 2000, $n=39$). Therapists working with trauma ($n=20$) reported beliefs about the benevolence of the world ($M=34.6$, $SD= 4.5$), meaningfulness of the world ($M= 36.0$, $SD= 4.6$) and self-worth ($M= 53.2$, $SD= 5.5$). Furthermore, a ‘control’ group of therapists (that did not work with trauma; $n=19$) reported beliefs about the benevolence of the world ($M=34.9$, $SD= 4.8$), meaningfulness of the world ($M=36.0$, $SD= 7.1$) and self-worth ($M=51.3$, $SD= 6.6$) at similar levels. Midwives within the present study reported on average more positive beliefs about the benevolence of the world, more negative beliefs about the meaningfulness of the world, and slightly more negative beliefs about self-worth in comparison to the therapists within this study. However, it is unlikely that therapists witness traumatic events, and so the type of exposure may be qualitatively different to the majority of midwives within this sample, and may therefore lead to different levels of worldview schema.

Table 3.8 Means and standard deviations for scores on the World Assumptions Scale (WAS) ($n=418$)

Scale (items):	Range	Mean total score	SD	Mean item score	SD
Total WAS score	68-161	122.15	15.02	3.83	.47
Benevolence of the world (8)	13-48	37.65	5.61	4.73	.70
Meaningfulness of the world (12)	13-53	34.00	7.21	2.84	.60
Self-worth (12)	23-71	50.50	8.59	4.23	.71

Burnout symptomatology

Burnout scores were measured using the Maslach Burnout Inventory (MBI; Maslach et al., 1996). A typical 'burnout' profile includes high levels of emotional exhaustion (EE) and depersonalisation (DP), and low levels of personal/professional accomplishment. Average symptom scores within this sample suggest a moderate level of emotional exhaustion ($M=23.81$, $SD=11.49$), a low level of depersonalisation ($M=3.4$, $SD=4.05$) and a low-moderate level of perceived personal accomplishment ($M=38.94$, $SD=5.86$). Therefore, on average, the sample did not report symptoms of a typical burnout profile. However, when individual symptom categories were investigated, over a third ($n=156$, 40%) of midwives completing the MBI ($n=391$) reported high levels of emotional exhaustion, 4% ($n=16$) reported high levels of depersonalisation, and 58.3% ($n=228$) reported low levels of perceived accomplishment. Mean scores and measures of dispersion and category interpretation are presented in Table 3.9.

Normative values for burnout are provided by the authors of the scale (Maslach et al., 1996) using a sample of different professional groups, including medical workers, social services and education. Emotional exhaustion was reported at an average of 20.99 ($SD=10.75$), depersonalisation at 8.73 ($SD=5.89$) and personal accomplishment at an average of 34.58 (7.11). With these average values in mind, the present sample reported emotional exhaustion at a greater level ($M=23.81$, $SD=11.49$), depersonalisation at a lower level ($M=3.84$, $SD=4.05$), personal accomplishment at a greater level ($M=38.94$, $SD=5.86$) in comparison to controls. Maslach et al. (1996) also provides normed values for difference health or human service professional groups. Professionals working in medical roles (physicians and nurses) reported emotional exhaustion at an average of 22.19 ($SD=9.53$), depersonalisation at an average of 7.12 ($SD=5.22$) and personal accomplishment at an average of 36.53 ($SD=7.34$). Therefore the present midwifery sample reported greater

emotional exhaustion, less depersonalisation and greater personal accomplishment in comparison to medical professionals.

Table 3.9 Means, standard deviations and category interpretation of scores on the Maslach Burnout Inventory (MBI) ($n=391$)

Scale (items):	Range	Mean	SD	Mean	SD	Category
		Score		item score		Interpretation
Emotional Exhaustion (9)	0-54	23.81	11.49	2.64	1.28	Moderate
Depersonalisation (5)	0-30	3.84	4.05	.77	.81	Low
Personal Accomplishment (8)	0-48	38.94	5.86	4.79	.77	Moderate
	Emotional exhaustion (EE)		Depersonalisation (DP)		Personal Accomplishment (PA)	
	<i>N</i>	%*	<i>N</i>	%*	<i>N</i>	%*
High	156	39.9	16	3.8	43	10.2
Moderate	110	28.1	61	14.5	127	30.2
Low	125	32.0	314	74.6	222	52.7

*percentage of sample completing the MBI

Perceived Impairment due to traumatic perinatal event experience

The Sheehan Disability Scale was used to measure midwives' perceived level of impairment to work, social and home/family areas of their life (SDS, Sheehan, 1983). There is no specific cut off for the SDS, however scores of 5 or above have been used to indicate a need for further attention. Greater scores on the scale indicate greater perceived impairment. Across the whole sample, work and home areas of midwives' lives were impaired by traumatic perinatal events to similar degrees (work $M= 3.08$, $SD= 2.51$; home $M= 3.01$, $SD= 2.91$). Social areas were less impaired ($M= 2.41$, $SD= 2.64$). Total scores across all three items was on average 8.61 ($SD= 7.40$). Mean values are presented in Table 3.10.

Scores were categorised according to whether they exceeded the estimated 'severity' cut off of ≥ 5 . When considering all those completing the SDS ($n=416$), 29% ($n=119$) exceeded the cut off for perceived work impairment, 21% ($n=88$) exceeded this for social impairment and 30% ($n=124$) exceeded for impairments to their home or family life. This suggests that for some midwives, professional experiences of traumatic perinatal events negatively impacted on work, social and family aspects of life.

Normative values are not available for the SDS. Some studies report mean values on the SDS following traumatic event exposure; however samples within these studies are not comparable to midwives. Neal, Green and Turner (2004) reported mean scores on the work ($M= 7.13$, $SD= 3.24$), social ($M=7.04$, $SD= 2.63$) and family life ($M=6.77$, $SD= 2.84$) domains in a sample of armed services personnel ($n=70$). However, the sample was predominantly male ($n=63$) with experience of combat, and a large proportion ($n=50$) was currently on sick leave. Therefore the sample is unlikely to provide a realistic comparison to midwives. Furthermore these characteristics may explain the somewhat elevated level of perceived impairment in relation to the present sample.

Table 3.10 Means, standard deviation and category interpretation of scores on the Sheehan Disability Scale (SDS) ($n=416$)

Subscale (item)	Range	Mean score	SD	$n \geq 5$	$\% \geq 5^*$
Work (1)	0-10	3.08	2.51	119	28.6
Social (1)	0-10	2.41	2.64	88	21.2
Family/ Home (1)	0-10	3.01	2.91	124	29.8
Total (3)	0-30	8.51	7.41	-	-

*percentage of sample completing the SDS, $n=416$.

Hypothesis 1.1:

There will be an association between worldview beliefs and symptoms of posttraumatic stress.

Pearson product moment correlation coefficient identified a significant association between overall PTS symptomatology and the overall nature of worldview beliefs held by participants ($r(411) = -.24$, $p < .001$). Each subscale of the IES-R and the WAS were significantly associated, apart from the benevolence of the world subscale of the WAS and the intrusion subscale of the IES-R. Table 3.11 presents correlation coefficients for each subscale. The findings suggest that more severe PTS symptomatology was associated with more negative worldview beliefs. However the magnitude of the association was small, with the majority of correlation coefficients failing to surpass 0.2 (Cohen, 1988). Large sample sizes are more likely to return a significant result, and therefore inferences made on this basis must be made with caution. Nevertheless, there was a general trend for greater symptoms of PTS to be associated with more negative endorsement of worldview beliefs.

Table 3.11 Bivariate correlations between scores on the Impact of Event Scale-Revised (IES-R) and the World Assumptions Scale (WAS) (n=413)

	BW	MW	SW	Total WAS
Intrusion	-.09	-.19*	-.19**	-.23**
Avoidance	-.12*	-.01	-.18**	-.15**
Arousal	-.12*	-.14**	-.23**	-.25**
Total IES-R	-.14**	-.14**	-.21**	-.24**

* $p < .05$; ** $p < .01$

Hypothesis 1.2:

There will be an association between the perceived impairment of traumatic perinatal events and posttraumatic stress symptomatology and worldview beliefs.

There was a significant association between greater overall PTS symptomatology and a greater level of perceived impairment to work ($r(411) = .73, p < .001$), social ($r(411) = .72, p < .001$) and home life ($r(411) = .72, p < .001$). Overall symptoms of posttraumatic stress and the overall level of perceived impairment due to traumatic perinatal event exposure were significantly and positively correlated ($r(411) = .79, p < .001$). Therefore, greater symptomatology was strongly associated with a greater level of perceived impairment to various domains of life, including work life but also social and family/ home life areas as well. Please see Table 3.12 for further details.

There was also a significant association between more negative worldview schema and a greater level of perceived impairment to work ($r(412) = -.24, p < .001$), social ($r(412) = -.22, p < .001$) and home life ($r(412) = -.22, p < .001$). More negative overall worldview schema were also significantly associated with a greater level of overall perceived impairment ($r(412) = -.24, p < .001$). The strength of association between perceived impairment and worldview beliefs was small, with R-values failing to surpass .3. However, there was a general association for participants with more negative endorsement of worldview beliefs to also perceive areas of their life to have been negatively affected following traumatic perinatal event experience(s).

Therefore correlation analyses were used to examine the association between the theoretical symptomatic and cognitive responses to traumatic perinatal events, with the extent to which midwives' perceived their experience to have impaired their work, social and family lives. Whilst it may be expected for participants to perceive a certain level of impairment within

their work lives following a work-based experience of trauma, analyses identifies a similar level of perceived impairment within more external domains of life, with similar associations to social and home life also.

Table 3.12 Bivariate correlations between scores on the Impact of Event Scale- Revised (IES-R), World Assumptions Scale (WAS) and the Sheehan Disability Scale (SDS)

	IES-R (<i>n</i> =413)				WAS (<i>n</i> =414)			
	INT	AV	AR	Total	BW	MW	SW	Total
Work	.69**	.57**	.73**	.73**	-.13*	-.13**	-.22**	-.24**
S Social	.68**	.57**	.71**	.72**	-.13**	-.14**	-.18**	-.22**
D Home	.68**	.57**	.73**	.72**	-.16**	-.11*	-.19**	-.22**
S Total	.74**	.62**	.78**	.79**	-.16**	-.13*	-.21**	-.24**

* $p < .05$; ** $p < .01$

Scores for the IES-R, MBI and WAS were compared between midwives who perceived their experience of traumatic perinatal events had impact upon them in a) a beneficial and adverse way, b) a beneficial way only and c) an adverse way only. Mean values indicate that midwives who perceived their experience to have impacted upon them in only an adverse way reported higher symptoms of posttraumatic stress ($M = 28.62$, $SD = 10.36$), more negative worldview beliefs ($M = 117.96$, $SD = 13.00$), and more severe scores of emotional exhaustion ($M = 28.62$, $SD = 4.63$), depersonalisation ($M = 4.63$, $SD = 4.36$) in comparison to midwives who had perceived their experience to have had both a beneficial and adverse impact, or just an adverse impact. Descriptive statistics for each group are presented in Table 3.13. This finding indicated that the nature of impact of the event perceived by the midwife was aligned with the severity of posttraumatic stress and burnout responses, and the nature of worldview beliefs reported

Table 3.13 Means and standard deviations of scores on response measures for midwives perceiving their experience of a traumatic perinatal event to have had a beneficial, adverse or mixed impact

	Beneficial and adverse (n=212)	Beneficial only (n=81)	Adverse only (n=27)	No perceived impact (n=59)
IES-R	30.63 (17.02)	21.41 (15.95)	41.70 (21.59)	20.64 (15.51)
WAS	120.92 (14.53)	125.41 (15.79)	117.96 (13.00)	121.48 (15.14)
EE ¹	25.00 (11.50)	21.24 (11.43)	28.62 (10.36)	21.85 (11.20)
DP ¹	4.26 (4.01)	3.18 (3.33)	4.63 (4.36)	2.91 (3.96)
PA ¹	39.03 (5.38)	39.51 (6.34)	37.86 (7.06)	38.31 (6.41)

¹n= 196 for beneficial and adverse, n= 78 for beneficial, n= 57 for no perceived impact

Considerations of leaving the profession and PTS symptomatology

Midwives who reported seriously considering leaving the profession after a traumatic perinatal event experience (n=148) had an average IES-R score of 38.50 (SD= 17. 90).

Midwives who did not seriously consider leaving the profession (n= 268) reported a significantly lower IES-R score of 21.41 (SD= 14.64), $t(414)= 10.515$, $p<.001$). Therefore midwives who reported that they had seriously considered leaving the profession reported significantly greater symptoms of PTS.

Summary of for aim 1

There was a significant association between a greater level of PTS symptomatology and more negative worldview schema. However, the magnitude of association was small. Given the large sample size, significant associations are more likely to be identified and therefore this must be taken into account when making inferences particularly with regard to small associations. Greater levels of PTS symptomatology were also significantly associated with a greater level of perceived impairment to work, social and home life domains. More negative worldview schemas were also associated with greater perceived impairment to work, social and home life. Thus, participants with greater levels of traumatic stress also identified a greater negative impact on their work, social and family lives following experiencing a traumatic perinatal event.

2.5.2. Nature of exposure and response to traumatic perinatal events

Aim 2

To investigate whether, and how, the nature of exposure (witnessing, listening to) to a traumatic perinatal event relates to different traumatic stress responses.

Hypothesis 2.1:

There will be a difference in the levels of posttraumatic stress symptomatology and worldview schema reported by participants with different types of exposure (witnessed, listened to, or both) to traumatic perinatal events.

Participants were grouped according to the type of exposure to traumatic perinatal events; 1) witnessed and heard ($n=297$), 2) witnessed only ($n=102$) and 3) heard only ($n=17$) (total $n=416$). Traumatic stress symptomatology refers to symptoms of posttraumatic stress (PTS) as measured using the IES-R, and worldview beliefs as measured by the world assumptions scale (WAS). Table 3.14 displays the mean (and standard deviation) of total scores for the IES-R and WAS between each exposure group.

A one way (between participants) ANOVA was conducted to investigate whether participants with different types of exposure to traumatic perinatal events reported significantly different levels of PTS symptomatology. Despite varying group sizes, Levene's test for homogeneity of variance was not significant ($F(2, 413) = 2.5, p = .082$) suggesting that the assumption of homogeneity of variance was met. However, group sizes were very unequal and therefore Welch's statistics were also consulted. There was no difference in the significance of differences between groups, and therefore results from the ANOVA are presented.

The results of the ANOVA indicated that there was a significant difference in scores on the IES-R by exposure group ($F(2, 413) = 7.3, p = .001$). Post hoc comparisons using Tukey's HSD test identified significantly higher scores for PTS symptomatology in participants with both forms of exposure (witnessed and heard), in comparison to participants that only witnessed events ($p = .001$). There were no other significant between group comparisons. Average scores for each exposure group are displayed in Figure 3.3.

A one way (between participants) ANOVA was conducted between exposure groups and total scores on the WAS to establish whether participants with different types of exposure reported significantly different levels of endorsement for the worldview beliefs. Listwise

deletion resulted in slightly more participants included in this analysis; witnessed and heard ($n=297$), witnessed only ($n=102$) and heard only ($n=19$) (total $n=418$). Levene's statistic suggested that the variance in each group was not significantly different ($F(2, 415)=.10$, $p=.908$) and therefore it is appropriate to report the standard F value for the ANOVA. Due to very unequal groups, Welch's statistics were also observed for any difference. There were no significant differences between the groups in worldview beliefs, $F(2, 415)=1.1$, $p=.324$. Average total scores for each exposure group are presented in Figures 3.2 and 3.3.

Table 3.14 Means and standard deviations for scores on the Impact of Event Scale-Revised (IES-R) for midwives depending on their extent of exposure (type) to traumatic perinatal events

Impact of Event Scale- Revised (IES-R)					
	<i>N</i>	Total	Intrusion	Avoidance	Arousal
Witnessed & Heard	297	29.57 (17.55)	13.55 (7.53)	8.89 (6.10)	7.13 (5.81)
Witnessed	102	22.46 (16.87)	10.87 (7.28)	6.16(5.71)	5.42 (5.62)
Heard	17	21.45 (22.06)	9.59 (9.53)	6.74(6.85)	5.12 (6.88)
Total	416	27.49 (17.85)	12.74 (7.65)	8.13(6.14)	6.63 (5.85)
World Assumptions Scale (WAS)					
	<i>N</i>	Total	Benevolence of the World	Meaningfulness of the World	Self-Worth
Witnessed & Heard	297	121.75 (15.30)	37.48 (5.75)	33.91 (7.30)	50.35 (8.81)
Witnessed	102	122.38 (14.02)	37.88 (5.17)	33.92 (7.17)	50.58 (7.99)
Heard	19	127.05 (15.63)	38.89 (5.78)	35.68 (6.03)	52.47 (8.40)
Total	418	122.15 (15.02)	37.65 (5.61)	34.00 (7.21)	50.50 (8.59)

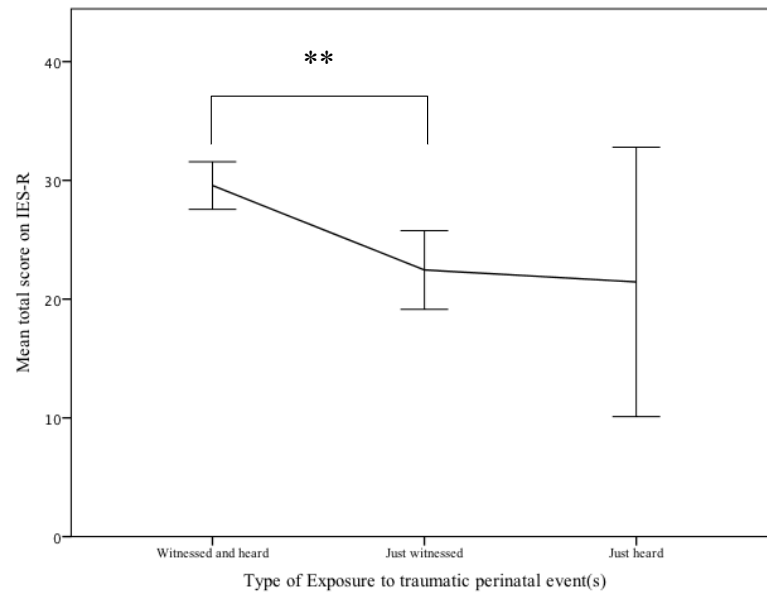


Figure 3.2 Comparison of mean IES-R score reported by midwives within each exposure group ($n=416$); $**p=.001$

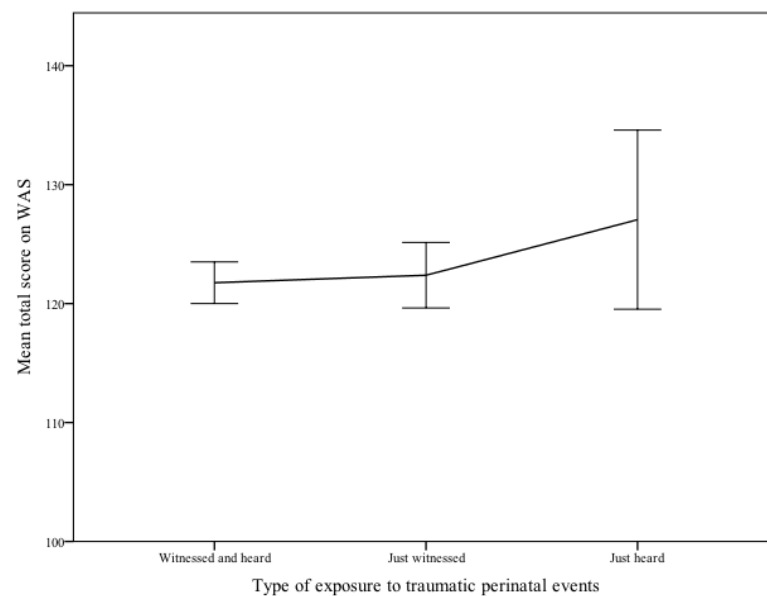


Figure 3.3 Comparison of mean IES-R score reported by midwives within each exposure group ($n=418$)

Summary of aim 2

There was a significant difference in posttraumatic stress symptomatology reported by participants with certain different types of exposure. There was evidence to suggest that experiencing traumatic perinatal events through witnessing and listening to accounts lead to significantly more severe posttraumatic stress responses in comparison to those that only

ever witnessed events. Contrary to theoretical prediction, the way in which participants' experienced trauma did not result in significantly different endorsement of worldview beliefs.

It was interesting to note that there was no significant difference between mean values for PTS and WAS scores in participants with only 'listened to' exposure, in comparison to the other two groups of participants. There was a general trend for participants with only 'listened to' experiences to report on average lower levels of PTS symptomatology and more positive worldview schema in comparison to both other exposure groups. However, there was a higher level of variation within this group. The very small sample size may have limited the conclusions that can be drawn in terms of symptomatic differences between this and other exposure groups.

2.5.3. Predicting symptomatic responses to traumatic perinatal events

Aim 3:

To examine the predictive utility of variables identified as associated/predictive of traumatic stress symptomatology.

Hypotheses

- 3.1 The extent of experience in the profession (years since qualified) will predict PTS symptomatology and worldview schema.**
- 3.2 Higher levels of empathic engagement will predict PTS symptomatology and worldview schema following exposure to traumatic perinatal events.**
- 3.3 The total number of traumatic events experienced will predict PTS symptomatology and worldview schema.**
- 3.4 Personal trauma history (not related to childbirth) will predict PTS symptomatology and worldview schema following traumatic perinatal event exposure.**
- 3.5 Personal experience of childbirth trauma will predict PTS symptomatology and worldview schema following traumatic perinatal event exposure.**
- 3.6 The extent of exposure (witnessed and heard, or witnessed or heard only) will predict PTS symptomatology and worldview schema.**

Predicting Posttraumatic stress

Bivariate correlations revealed significant associations between total IES-R score and empathy ($r(317) = .13, p = .021$), the total number of traumatic perinatal experiences ($r(317) = .18, p = .001$), whether the individual had a personal trauma history ($r(317) = -.12, p = .034$), and whether they had both witnessed and listened to traumatic perinatal events ($r(317) = .21, p < .001$). Therefore, a higher level of PTS symptomatology was associated with a greater level of empathic concern, a greater number of traumatic perinatal event experiences listened to, the presence of a personal trauma history and with individuals with both types of exposure to traumatic perinatal events. The total score on the IES-R was not associated with the extent of experience held within the midwifery profession ($r(317) = .04, p = .509$) or whether the participant had a personal experience of traumatic childbirth ($r(317) = .01, p = .839$). Further details are presented in Table 3.15.

A standard multiple regression analysis was conducted with the associated variables and the total score on the IES-R. The independent variables were the level of empathic concern (EC), total number of traumatic perinatal event experiences (NEXP), whether the participant had a personal history of trauma (PT), whether the participant had experienced both types of traumatic perinatal event exposure (WH). The multiple regression equation was significant ($F(4, 320) = 6.4, p < .001$). The amount of variance explained by the independent variables was 6% ($R^2 = .06$). Therefore, whilst the regression model significantly predicted the level of PTS symptomatology, the amount of overall variance accounted for was small. Table 3.16 presents further details about this regression. Two of the independent variables significantly predicted the level of PTS symptomatology within the model. The total number of traumatic perinatal event experiences ($t(320) = 2.2, p = .029$) and whether the participant had experienced traumatic perinatal events through both witnessing and listening to them ($t(320) = 2.8, p = .005$) were both significant independent predictors of PTS symptomatology and accounted for 2% of the variance each. The additional two independent variables contributed a further .03 in shared variability.

It can be inferred that knowing the number of traumatic perinatal event experiences, whether these were both witnessed and listened to, the level of empathic concern for others and whether the individual has a personal trauma history can predict the level of PTS symptomatology reported. However, the low strength of association and magnitude of shared and unique variability suggest that these predictor variables are limited in their predictive utility.

Table 3.15 Bivariate correlations (Pearson's R) between personal and professional experience variables and scores on the Impact of Event Scale- Revised (IES-R)($n=319$)

	IES-R total Score
Experience in the profession (EXP)	.037
Empathic Concern (EC)	.129*
N traumatic perinatal experiences (NEXP)	.181**
Personal trauma history (Y/N)(PT)	-.119*
Personal childbirth trauma history (Y/N)(PCBT)	-.011
Both types of exposure (Y/N)	.212**

* $p < .05$, ** $p < .001$

Table 3.16 Standard multiple regression between personal and professional experience variables (IV's) and total score on the IES-R (DV)

	<i>B</i> (95% CI)	SE <i>B</i>	β	<i>p</i>
Constant	7.63 (-7.122, 22.39)	7.50		$p = .310$
Empathic concern	.41 (-0.09, 0.92)	.26	.09	$p = .110$
N traumatic perinatal experiences	.08 (0.01, 0.14)	.03	.12	$p = .029^*$
Personal trauma history	2.76 (-1.1- 6.63)	1.97	.08	$p = .161$
Extent of exposure	3.82 (2.06-11.57)	2.42	.16	$p = .005^*$

Note. $N = 325$. CI= Confidence Interval. $R^2 = .07$. Adjusted $R^2 = .06$. * $p < .05$.

Predicting worldview beliefs

Bivariate correlations revealed no significant association between any variable and the total score on the WAS (details are presented in Table 3.17) indicating a general lack of linearity between the personal and professional variables, and worldview beliefs. Total scores on the measure of worldview schema were not associated with experience in the profession ($r(314) = .09$, $p = .131$), empathic concern ($r(314) = .07$, $p = .209$), the number of traumatic perinatal experiences ($r(314) = .01$, $p = .824$), whether the individual had a personal history of general ($r(314) = .01$, $p = .862$) or childbirth related ($r(314) = -.04$, $p = .495$) trauma, or whether the participant had both types of exposure to traumatic perinatal events ($r(314) = .01$, $p = .903$). As a result of this it was not feasible to run a regression analysis predicting the level of worldview schema using these independent variables.

Table 3.17 Bivariate correlations between personal and professional experience variables and scores on the World Assumptions Scale (WAS)(n=316)

	WAS total score
Experience in the profession (EXP)	.08
Empathic Concern (EC)	.07
N traumatic perinatal experiences (NEXP)	.01
Personal trauma history (Y/N)(PT)	.01
Personal childbirth trauma history (Y/N)(PCBT)	-.04
Both types of exposure (Y/N)	.01

* $p < .05$; ** $p < .01$

Summary of aim 3

The overall level of posttraumatic stress symptomatology was significantly associated with a greater level of empathy, a greater number of total traumatic perinatal event experiences, experiencing these events by both witnessing and listening to them, and having a personal history of trauma. However, the strength of correlations was small. Contrary to theoretical prediction, there was no association between the extent of experience held within the profession and whether the midwife considered a personal experience of giving birth to be traumatic.

The level of posttraumatic stress symptomatology could be significantly predicted by a model combining variables for empathy, personal trauma history, total number of traumatic perinatal event experienced and whether the individual experienced events through witnessing and listening to them. The total number of traumatic perinatal event experiences, and whether the individual had experienced these through both witnessing and listening to them, both had significant regression coefficients. Despite a significant regression model, the amount of variance accounted for in PTS symptomatology was small (6%). There was no association between levels of worldview schema held by participants and the personal and professional variables. Therefore, regression analyses were not conducted.

2.5.4. Predicting burnout

Aim 4

To investigate whether, and how, traumatic stress responses predict levels of burnout.

Hypotheses:

4.1 The severity of posttraumatic stress symptomatology will be associated with each of the burnout responses (emotional exhaustion EE, depersonalisation DP and personal accomplishment PA).

4.2 Worldview schema will be associated with each of the burnout responses (emotional exhaustion, depersonalisation and personal accomplishment).

4.3 Symptoms of posttraumatic stress and worldview schema will predict burnout responses of emotional exhaustion, depersonalisation and personal accomplishment.

The association between PTS, WAS and burnout symptomatology

Pearson's product moment correlation coefficient identified small to moderate associations between symptoms of posttraumatic stress and burnout, and worldview schema and burnout (Table 3.18). A greater level of overall PTS symptomatology was moderately associated with a greater level of emotional exhaustion ($r(385) = .42, p < .001$). There was a small association between more severe symptoms of overall PTS and a greater level of depersonalisation ($r(385) = .24, p < .001$). However, there was no significant association between overall PTS symptomatology and perceptions of personal accomplishment ($r(385) = -.02, p = .339$).

Overall, worldview schemas were also significantly associated with levels of burnout (Table 3.19). More negative worldview schema were associated with a greater level of emotional exhaustion ($r(386) = -.31, p < .001$), a greater level of depersonalisation ($r(386) = -.26, p < .001$). More positive worldview beliefs were associated with a greater level of perceived personal accomplishment ($r(386) = .26, p < .001$). However when inspecting beliefs for each subscale, beliefs about the meaningfulness of the world were not significantly associated with emotional exhaustion ($r(386) = -.08, p = .118$), depersonalisation ($r(386) = -.02, p = .642$) or personal accomplishment ($r(386) = -.02, p = .966$). Therefore, whilst negative worldview schema were associated with symptoms synonymous with a burnout profile, this may only include beliefs about the benevolence of the world and self-worth.

Table 3.18 Bivariate correlations between burnout (MBI) posttraumatic stress symptoms (IES-R) and worldview beliefs (WAS)

	IES-R (<i>n</i> =387)				WAS (<i>n</i> =388)			
	INT	AV	AR	Total	BW	MW	SW	Total
EE	.38**	.38**	.40**	.42**	-.23**	-.08	-.33**	-.31**
DP	.20**	.26**	.22**	.25**	-.29**	-.02	-.25**	-.26**
PA	.03	-.06	-.03	-.02	.25**	-.02	.30**	.26**

* $p < .05$; ** $p < .01$

Burnout in midwives with clinically relevant PTS symptomatology

Mean scores for emotional exhaustion were significantly higher for midwives with clinical levels of PTS symptomatology ($M = 29.01$, $SD = 4.93$) in comparison to midwives with lower PTS symptoms ($M = 21.42$, $SD = 3.34$), $F(1, 385) = 40.59$, $p < .001$. A similar difference was identified with mean scores for depersonalisation, with midwives clinically significant levels of PTS symptoms reporting significantly higher scores for depersonalisation ($M = 4.93$, $SD = 4.65$) in comparison to midwives with lower PTS symptoms ($M = 3.34$, $SD = 3.66$), $F(1, 385) = 13.44$, $p < .001$. There was no significant difference between mean scores for personal accomplishment in midwives with clinical levels of PTS ($M = 39.22$, $SD = 5.66$) and those without ($M = 38.74$, $SD = 5.99$), $F(1, 385) = .57$, $p = .451$.

4.3. Hypothesis: Symptoms of posttraumatic stress and worldview schema will predict burnout responses of emotional exhaustion, depersonalisation and personal accomplishment.

Emotional Exhaustion

A standard multiple regression was conducted with symptoms of posttraumatic stress (intrusion, avoidance and arousal) and worldview schema (benevolence of the world, self-worth) as independent variables and the level of emotional exhaustion reported by participants as the dependent variable. Beliefs about the meaningfulness of the world were not entered into the regression equation as earlier correlation analyses did not identify a significant relationship with emotional exhaustion. Details are presented in Table 3.19.

The regression model predicting emotional exhaustion (EE) with the responses to traumatic perinatal events was significant, $F(5, 378) = 24.24$, $p < .001$. The adjusted R^2 value indicates that the model accounted for 23% of the variance in EE. Three independent variables were uniquely and significantly predictive of EE. Avoidant symptomatology ($t(378)$, 2.69, $p = .007$), beliefs about the benevolence of the world ($t(378) = -.20$, $p = .047$) and beliefs about

self-worth ($t(378) = -4.149, p < .001$) accounted for 1%, 1% and 3% of the variance in EE respectively. This represented a unique variance of 5% (.05) and a shared variance of 18% (.18). Therefore emotional exhaustion, one dimension of burnout syndrome, was significantly predicted by responses to traumatic perinatal events, namely posttraumatic stress symptomatology and worldview schema. The combined model accounted for just over a fifth (23%) of the variance in EE responses. Beliefs about the benevolence of the world and self-worth, and avoidant symptomatology, were all identified as significant regression coefficients.

Table 3.19 Standard multiple regression analysis for Emotional Exhaustion (EE, DV) and scores on the subscales for the Impact of Event Scale-Revised (IES-R) and World Assumptions Scale (WAS)(IV's)

	<i>B</i> (95% CI)	SE <i>B</i>	β	<i>p</i>
Constant	39.42 (31.10- 47.74)	4.23		$p < .001$
Intrusion	.14 (-0.12- 0.41)	.13	.10	$p = .286$
Avoidance	.32 (.087, 0.56)	.12	.17	$p = .007^*$
Arousal	.26 (-0.10, 0.62)	.18	.13	$p = .163$
Benevolence of the World	-.20 (-0.40, -0.003)	.10	-.10	$p = .047$
Self-worth	-.28 (-0.41, -0.15)	.07	-.21	$p < .001^*$

Note. $N = 384$. CI= Confidence Interval. $R^2 = .24$, Adjusted $R^2 = .23$

Depersonalisation

A standard multiple regression was conducted between symptoms of posttraumatic stress (intrusion, avoidance and arousal) and worldview schema (benevolence of the world, self-worth) as independent variables and scores of depersonalisation as the dependent variable. Details are presented in Table 3.20. The regression model was significant in predicting levels of depersonalisation reported by midwives, $F(5, 378) = 12.93, p < .001$. The adjusted R^2 value indicates that 14% of the variance in depersonalisation could be accounted for with the combined model of PTS symptomatology and worldview beliefs.

Three of the six predictor variables were significant independent predictors of depersonalisation within the model. These were avoidance ($t(377) = 2.80, p = .005$), benevolence of the world ($t(377) = -4.19, p < .001$) and self-worth ($t(377) = -2.11, p = .035$).

Therefore, symptoms of PTS and worldview schema could significantly predict the level of depersonalisation reported by midwives. However the combined model only accounted for 16% of the variance in depersonalisation. Therefore, although the regression model was significant, it is likely that there are additional variables aside from the measured responses to traumatic perinatal events that could predict depersonalisation.

Table 3.20 Standard multiple regression analysis for Depersonalisation (DP, DV) and scores on the subscales for the Impact of Event Scale-Revised (IES-R) and World Assumptions Scale (WAS)(IV's)

	<i>B</i> (95% CI)	SE <i>B</i>	β	<i>p</i>
Constant	11.31 (8.19, 14.43)	1.59		$p<.001$
Intrusion	0.2 (-0.08, 0.12)	.05	.04	$p=.680$
Avoidance	.13 (0.04, 0.22)	.045	.19	$p=.005^*$
Arousal	-.01 (-0.14, 0.13)	.07	-.01	$p=.911$
Benevolence of the World	-.16 (-0.24, -0.09)	.04	-.22	$p<.001^{**}$
Self-worth	-.05 (-0.10, -0.004)	.03	-.11	$p=.035^*$

Note. $N= 384$. CI= Confidence Interval. $R^2= .15$, Adjusted $R^2= .14$. * $p<.05$, ** $p<.001$

Personal accomplishment

A standard multiple regression was conducted between worldview schema as the independent variables, and the level of perceived personal accomplishment as the dependent variable. Details are presented in Table 3.21. The regression model was significant, $F(2, 385)= 23.66$, $p<.001$. The adjusted R^2 value indicates that worldview schema accounted for 11% of variance in perceived personal accomplishment. PTS symptomatology and beliefs about the meaningfulness of the world were not entered into the regression model as earlier correlation analysis did not identify a linear association between these variables in relation to personal accomplishment.

Both regression coefficients were significantly predictive of perceived personal accomplishment; beliefs about the benevolence of the world ($t(385)= 2.95$, $p=.003$) and self-worth ($t(377)= 4.47$, $p<.001$). The unique variance accounted for by these significant regression coefficients was 7% (.07).

Therefore, perceptions over personal accomplishment whilst working as a midwife could be significantly predicted by the level of worldview beliefs held about the benevolence of the world and self-worth. Interestingly, symptoms of posttraumatic stress were not associated with perceptions of personal accomplishment. Despite a significant regression equation, the amount of variance accounted for by the worldview beliefs was fairly low (11%).

Table 3.21 Standard multiple regression analysis for Personal Accomplishment (PA, DV) and scores on the subscales for the Impact of Event Scale-Revised (IES-R) and World Assumptions Scale (WAS)(IV's)

	<i>B</i> (95% CI)	SE <i>B</i>	β	<i>p</i>
Constant	24.68 (20.46, 28.91)	2.15		$p<.001^{**}$
Benevolence of the World	.16 (0.06, 0.27)	.06	.16	$p=.003^{*}$
Self-worth	.16 (0.10, 0.23)	.04	.24	$p<.001^{**}$

Note. $N= 384$. CI= Confidence Interval. $R^2= .11$, Adjusted $R^2= .11$. $^{*}p<.05$, $^{**}p<.001$

Summary of aim 4

Analysis suggests that responses to traumatic perinatal events predicted burnout syndrome within this sample. All of the regression analyses were significant. However, symptoms of PTS and worldview schema accounted for the greatest level of variance in symptoms of emotional exhaustion (23%) in comparison to symptoms of depersonalisation (16%). PTS symptomatology was not associated with perceptions of personal accomplishment and was not entered into the regression equation. However, beliefs about the benevolence of the world and self-worth significantly predicted perceptions of personal accomplishment, accounting for 11% of the variance. Midwives reporting symptoms commensurate with PTS were also more likely to report higher levels of emotional exhaustion and depersonalisation, but no difference in personal accomplishment. Although the regression analyses were all significant, the amount of variance accounted for by traumatic stress responses was fairly low and it may be that additional factors improve the strength of prediction.

2.5.5.Examination of symptom structure

Aim 5

To factor analyse reported symptoms of traumatic stress and burnout to investigate any underlying patterns of response.

A principal components analysis (PCA) was conducted using scores from the IES-R, WAS and MBI scales. Listwise deletion of participants missing one or more of the measures resulted in a sample size of 384. This is considered to surpass power requirements for factor analysis (Tabachnick & Fidel, 2005). The p value produced from the Bartlett's test of sphericity ($p < .001$) rejected the null hypothesis that variables were uncorrelated. However, inferences about sphericity based on this are limited as a large sample size is more likely to return a positive result.

An initial PCA (no rotation) selecting eigenvalues exceeding 1 identified 19 factors, and explained 65.3% of the variance. Cattell's scree plot (Figure 3.4) was inspected and it was decided that several factors could be discarded as the slope of the scree levelled out at 7 factors. The PCA was repeated with 7 factors extracted. The total variance explained by the 7 factors was 44.6%. The unrotated factor plot of the PCA conducted to select for 7 factors showed that several variables loaded moderately on to factor 1. However the other variables loaded less clearly on to the other factors. Therefore the PCA was repeated with oblique (direct oblimin) rotation. Oblique rotation was used as it is considered appropriate for data where several correlation values exceed .3 (Tabachnick & Fidell, 2005).

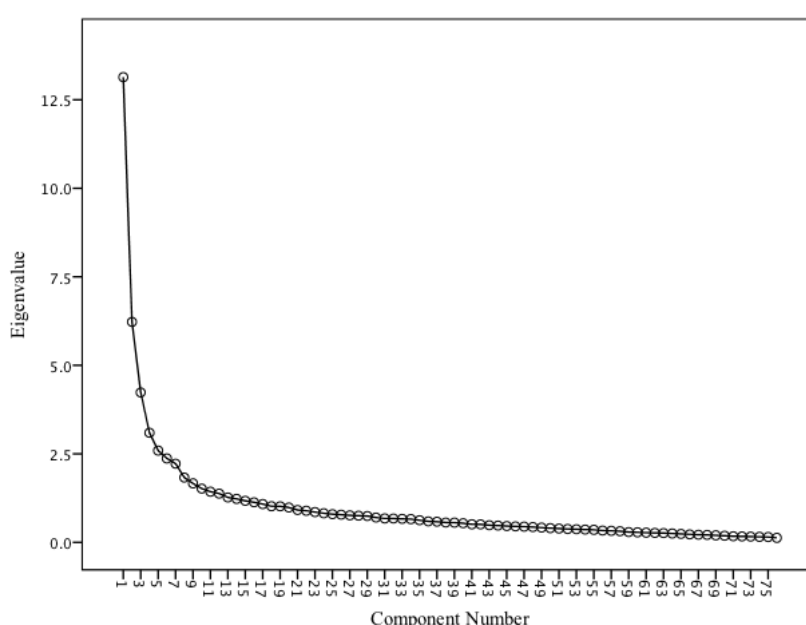


Figure 3.4 Scree plot for the Principal Components Analysis (PCA) of scores on the Impact of Event Scale-Revised (IES-R), World Assumptions Scale (WAS) and Maslach Burnout Inventory (MBI)

The pattern matrix was inspected for the resulting factor structure. Items with absolute loadings $> .3$ were considered to be 'salient' for that particular factor. Items with absolute

loadings $<.3$ were not considered to be ‘saliently’ loaded on to the respective factor. Items with absolute loadings $<.2$ were excluded from the pattern matrix output to aid interpretation. The pattern matrix is displayed in Table 3.22.

Description of factors

Factor one had twenty-two items, all from the IES-R, with salient loadings. The majority of items ($n=21$) were uniquely loaded onto this factor, and the majority of items ($n=16$) had absolute loadings exceeding .6. The item ‘I thought about it when I didn’t mean to’ was saliently loaded onto factor one at .750, but also on to factor three at -.210. This was the only item within this factor to display cross loading. Factor one could be considered to represent ‘posttraumatic stress’ responses to traumatic perinatal event experiences, as all items within this factor were from the IES-R

Factor two had nine items with salient loadings. Four of these nine items also loaded onto another factor, albeit not ‘saliently’. For two of these items there was a clear discrepancy between the cross loadings, where absolute loadings on to factor two exceeded .6 and the loading on to the other factor was .2. However, the other three items loaded equally low on both factor two (at .3) and a different factor (at .2). Items from factor two were all originally from the World Assumptions Scale, and therefore represent worldview beliefs. More specifically, each item related to beliefs about the benevolence of the world.

Factor three had nine items with salient loadings. The majority of items within this factor ($n=5$) were strongly correlated ($r \geq .6$). One item was also loaded on to factor six but this was not considered to be salient ($<.3$). All items were originally from the world assumptions scale and again represent a response relating to worldview beliefs. The majority of items were from the meaningfulness of the world subscale, and represent beliefs about outcome distribution in bad events.

Factor four had thirteen items saliently loaded onto it. Four items displayed problematic loading, as they also loaded on to two additional factors each. However, they were saliently loaded on to factor four and all other loadings were below .3. All items within this factor were originally from the MBI, and therefore represent burnout responses. Items were mainly from the emotional exhaustion subscale of the MBI. Inspection of all items identifies a general trend between items to represent feelings of exhaustion and negativity within the work domain.

Factor five had seven items with salient loadings. Two items also correlated (but to a lesser extent, $r < .3$) onto factor four. Again, all items were originally from the MBI and represent perceptions over personal accomplishment within the working role.

Factor six had seven items saliently loaded onto it. One item loaded onto two additional factors, but not saliently. Another item was more problematic and loaded onto factor six at .346 and also factor two at .336, thus not displaying a particularly salient loading on to either. As all items within this factor were from the world assumptions scale, this could again represent a response of worldview beliefs. Items appear to represent beliefs about luck, but also about negative feelings of self-worth.

Factor seven had nine items saliently loaded on to it, but was slightly more problematic than the other factors. Two items also loaded onto two additional factors (but all less saliently). Two items also loaded onto one additional factor. For one of these items, the loading was considered to be not salient. However for the other factor, loading at .373 on factor seven and also at .349 on factor three, was more problematic with no clear salient loading. Items within this factor were from the MBI and the WAS, and therefore display some cross-loading between responses to traumatic stress. Items represent beliefs about luck, chance and the perception held by participants about recipients of their care.

One item, *I almost always make an effort to prevent bad things from happening to me* did not significantly load on to any factor. This item is from the self-worth scale of the world assumptions scale.

Summary of aim 5

The items within each factor identify a trend for traumatic stress responses to load with other items from each original scale. Factors represent responses of PTS (factor one), beliefs about the goodness of the world (factor two), belief about the meaning behind the outcome of bad events (factor three), feelings of exhaustion at work (factor four), perceptions over personal accomplishment (factor five), beliefs about luck and self-worth (factor six) and a cross loaded factor seven relating to beliefs about luck and perceptions of the recipients of care. Factors mainly consisted of items from within the same original scale and responses within this analysis largely reflected the theoretical structures of PTS, worldview schema and burnout symptomatology.

Table 3.22 Principal Components Analysis of scores on the Impact of Event Scale-Revised, World Assumptions Scale and Maslach Burnout Inventory.

	Factor						
	1	2	3	4	5	6	7
I had trouble concentrating	.822						
Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea or a pounding heart	.778						
Other things kept making me think about it	.772						
I had waves of strong feelings about it	.766						
I found myself acting or feeling like I was back at that time	.754						
I thought about it when I didn't mean to	.750		-.210				
I was jumpy and easily startled	.733						
I had trouble falling asleep	.728						
I had trouble staying asleep	.727						
Pictures about it popped into my mind	.716						
I felt watchful and on guard	.709						
I was aware that I still had alot of feelings about it, but I didn't deal with them	.662						
I had dreams about it	.659						
Any reminder brought back feelings about it	.650						
I stayed away from reminders about it	.626						
I felt irritable and angry	.623						
I tried to remove it from my memory	.564						
I tried not to talk about it	.561						
I tried not to think about it	.556						
My feelings about it were kind of numb	.492						
I felt as if it hadn't happened or wasn't real	.473						
I avoided letting myself get upset when I thought about it or was reminded about it	.436						
People are basically kind and helpful (BW1)		.767					
There is more good than evil in this world (BW6)		.720					
If you look closely enough, you will see that the world is full of goodness (BW8)		.703					.216
The world is a good place (BW7)		.702					
Human nature is basically good(BW2)		.671					
The good things that happen in this world far out number the bad (BW5)		.643					
I am very satisfied with the kind of person I am (SW11)		.385			.232		
People don't really care what happens to the next person (BW3)		.344				.217	
People are naturally unfriendly and unkind (BW)		.324	-.273				
When bad things happen, it is typically because people have not taken the necessary actions to protect themselves (MW12)			.676				
People will experience good fortune if they themselves are good (MW 7)			.653				
By and large, good people get what they deserve in this world (MW8)			.645			-	.201
If people took preventative actions, most misfortune could be avoided (MW11)			.619				
People's misfortunes result from mistakes that they have made (MW 9)			.612				
Through our actions we can prevent bad things from happening to us (MW10)			.589				
Generally, people deserve what they get in this world (MW6)			.548				

Looking at my life, I realise that chance events have worked out well for me (SW3)		.448
I usually behave so as to bring about the greatest good for me (SW8)	.349	.373
I usually behave in ways that are likely to maximise good results for me (SW5)	.257	.349
<i>I almost always make an effort to prevent bad things from happening to me</i>		.239
<hr/> Oblique rotation. Converged in 15 iterations.		

CHAPTER 4. Characteristics of a traumatic perinatal event: Qualitative analysis of event descriptions (Study 1b)

1. Aim

The aim of this analysis was to investigate the characteristics of events perceived to be traumatic by midwives.

As part of the postal survey, midwives provided a short description of a perinatal event that they had perceived to be traumatic after witnessing it, or by listening to an account of it from a woman in their care. Events corresponded to a criterion adapted from the DSM-IV-TR's (APA, 2000) criterion A for PTSD. This was that the midwife had experienced an event where they perceived the mother or the baby to be at risk of serious injury or potentially death, and where they (the midwife) experienced a sense of fear, helplessness or horror in response.

2. Analysis

Transcripts were analysed using thematic analysis (Braun & Clark, 2006). Thematic analysis was used to identify, analyse, organise and describe common themes (Braun & Clarke, 2006) within descriptions of perinatal events perceived as traumatic by midwives. Thematic analysis is a flexible and effective method for identifying patterns within a set of qualitative data. It is not constrained within a specific theoretical framework (Braun & Clarke, 2006). Due to the brief nature of descriptions, coding was largely descriptive and only inferential when there was enough content to determine this to a satisfactory degree. Thematic analysis is an effective method of identifying commonalities or 'themes' across a large dataset (Braun & Clark, 2006), and therefore was particularly suited to the aims and scale of this investigation.

Descriptions of witnessed events were collated together and analysed separately to accounts of events that had been listened to and perceived as traumatic by midwives. The analysis began by the researcher reading through each event in order to familiarise themselves with the data. Transcripts were then coded, and these common codes were grouped together. This process was reviewed and refined through discussion with the supervisory team, where codes were checked against the data, and collapsed where applicable. Themes were devised that adequately accounted for multiple codes. These themes were then reviewed and refined further where necessary, and organised in terms of major overarching themes and minor themes. The final step in analysis involved a comparison of themes and codes identified within the witnessed and listened to accounts. Similarities and differences were identified,

and the two sets of data combined in order to produce an overarching description about the distinctive aspects of events determining perception of trauma in midwives.

Due to a high degree of homogeneity between events witnessed and listened to, the analysis of both groups are presented together with distinctive features outlined where necessary. Witnessed accounts are denoted by a 'W' in the brackets after the extract, accounts that were listened to by a woman in the midwife's care are denoted by an 'H,' representing that these accounts were 'heard.' Themes are presented in the order of frequency that they were reported by midwives. However this serves as a guide only, as prevalence does not necessarily indicate importance within thematic analysis (Braun & Clarke, 2006), and less frequently reported themes are still an important aspect of the analysis.

Quality control

Codes and themes were developed through discussion with the supervisory team, both of whom have extensive experience in conducting qualitative research and using thematic analysis. A proportion (20%) of extracts was randomly selected for second coding. Selection of codes was stratified to ensure that each code was represented, and were second coded by a Psychological Research Methods Master's level student, who was experienced in conducting thematic analysis in health related research. A percent agreement was calculated at 70%. When considering the likelihood of correctly categorising the extracts by chance (which was 1 in 6, or 16%), this value was four times higher than chance. The result of the second coding indicated that the final themes were accurately identified by a third party.

3. Presentation of themes

A total of 399 witnessed accounts and 283 listened to accounts were provided by midwives within the postal survey. There were six main categories emerged within the analysis. These related to the characteristics of the event, the organisational context, aspects relating to parents, perceived conduct of colleagues and the perception of blame and culpability. The sixth category was distinctive to the witnessed accounts only, and involved aspects relating to the personal salience of the event for the midwife. Each category is presented with the common themes first, followed by any unique aspects identified exclusively within witnessed or heard events. An overview of themes is presented in table 4.1.

Table 4.1 Overview of themes and subthemes from the thematic analysis of event descriptions

	Witnessed accounts only	Both Witnessed and Heard accounts	Heard accounts only
1. Event characteristics		1.1. Unexpected Sudden presentation 1.2. Highly severe 1.3. Complex presentation 1.4. Unable or difficult to control 1.5. Negative, on-going implication*	
2. Org. Context		2.1. Access to resources or personnel limited or delayed	2.2. The mother was left alone
3. Aspects relating to parents	3.3. A difficult relationship with parents	3.1. Having an existing relationship with parents 3.2. Supporting parents, delivering bad news	3.4. Acknowledgment of the mother's experience 3.5. Witnessing parents' distress
4. Conduct of colleagues	4.2. Perception that the abilities of colleagues were limited or unsatisfactory 4.3. Midwife not feel supported by other colleagues	4.1. Overly forceful interventions	4.4. Perception that the care provided to mothers was inadequate
1. Responsibility and Blame		5.1. Involvement of professional investigation 5.2. Attribution of blame	
6. Personal salience (Witnessed events only)	6.1. Limited professional experience 6.2. Feeling 'responsible' for the provision of care 6.3. Personal salience of the event		

* *disconfirmatory evidence also identified*

1. The characteristics of the event

The first category of themes involved aspects intrinsic to the event itself; relating to the content of the event, the presentation of the event, and factors relating to the wider environmental context within which it occurred. There were five themes within this category. Events were described as *unexpected and sudden*, highly *severe* in their nature, *complex* in their presentation, *difficult to control*, and sometimes involving *adverse or enduring implications*. The only distinction identified between witnessed and heard accounts was an additional reference to ineffective analgesia or a long duration of labour within accounts that were listened to. This reflects a different perspective on the severity of events and highlights the interaction between the mother's perceived experience (recounted to the midwife) and the midwife's appraisal of the event.

1.1. Unexpected and sudden occurrence (W and H)

Events were described as unexpected and occurring very quickly, without any prior indication or warning. As illustrated by the extracts below, the events perceived as traumatic often developed within a situation that was perceived to be 'normal' or progressing well beforehand.

"A sudden IUD whilst caring for a woman on labour ward." [ID 414 W]

"Unpredicted stillbirth at normal water birth." [ID 33 H]

1.2. Highly severe (W and H)

The events described by midwives were extremely severe in their nature. This included explicit reference to events with large amounts of blood loss, or severe difficulty in controlling or improving the event.

"Severe shoulder dystocia as a newly qualified midwife, baby came out requiring intensive resuscitation." [ID 150 W]

"Severe PPH [postpartum haemorrhage] - hearing her blood dripping on the floor feeling of dying/fear." [ID 73 H]

This theme also included implicit reference to events about the nature of severity, for example where midwives described a long resuscitation period, or complications that were severe in their very nature.

“Being the midwife who delivered an expectant healthy term baby. Baby born showing little signs of life - resuscitated for 20 minutes. Died 3 days later.” [ID 244 W]

“Stillbirth --> known IUD, shoulder dystocia, destructive delivery.” [ID 398 H]

As described before, the events that were listened to also involved reference to the duration of labour and experiences of procedures being implemented without effective analgesia.

“Long labour, epidurals taking three goes to get in. Long 2nd stage no descent to theatre for ventous/forceps - both tried - EmLSCS - baby- NNU with low apgar’s - probable birth trauma.” [ID 31 H]

“Forceps delivery in the labour ward without sufficient analgesia with extending episiotomy into 4th degree tear. Baby was admitted into SCBU with possible (confirmed later) fractured in skull. Woman had urinary incontinence and body [dys]morphia after.” [ID 57 H]

1.3. Complex presentation (W and H)

The way in which the event presented itself was also important, and some midwives described events involving multiple complications occurring simultaneously or within one birthing situation. Therefore perception of an event was influenced not only by the severity of a situation, but the complexity of it too.

“As a newly qualified midwife caring for a woman giving birth following IUFD [intrauterine fetal death]. There were 3 obstetric emergencies with the same woman, same shift. 1) Shoulder dystocia 2) maternal collapse + haemorrhage 3) further haemorrhage.” [ID312 W]

“...double instrumental (failed) followed by EMLSCS --> one lead to a hysterectomy massive PPH.” [ID 335 H]

1.4. Unable or difficult to control (W and H)

There were also aspects of events that midwives reported as being difficult to control, despite efforts. For example, instances where midwives felt that interventions or attempts at

resuscitation were ineffective or very difficult to implement. For the heard events, this reflected the mother's experience of being unable to act or witnessing others being unable to improve a situation.

"The forceps delivery of baby boy, the horror of the delivery, the futile attempt at resuscitation by myself and paed[s] [paediatricians], and his death." [ID 257 W]

"A woman describing her delivery and subsequent unsuccessful resuscitation of her baby while she looked on." [ID 264 H]

1.5. Negative and enduring implication (W and H)

Events described by midwives had enduring negative outcomes or implications for either the mother or the child. Implications involved physical injury or disability for the mother or the baby, or an implication for the mother's psychological health.

"In charge of delivery suite - ruptured uterus – IUD [intrauterine death]- ruptured bladder. Mother very ill. Second baby and therefore no more opportunity to have another baby. Very traumatic." [ID 390 W]

"Suboptimal CTG [cardiotocography]. Care by myself. Baby born in very poor situation - on-going lifelong disability." [ID 342 W]

"Failed instrumental delivery of shoulder dystocia baby in theatre. Baby RIP² mum then sent into spiral of drink and drugs and other children removed." [ID 18 H]

"Woman describing her PPH feeling the life drain out of her - decided to have sterilisation." [ID 120 H]

However not all events had an adverse outcome. Some events described by midwives ended positively, or without an on-going, negative consequence.

"Severe shoulder dystocia in isolated GP unit without resident medical staff - Apgar 0/1 - required intensive resuscitation - no heart rate until 3 mins and was transferred to consultant unit 20 miles away - good recovery and no long-term effects." [ID 22 W]

² This described an incident where the baby had died.

Summary

There was a distinct profile to the events perceived as traumatic by midwives. Events are extremely severe in the nature of (or potential for) threat towards the mother or child, were sometimes highly complex in their presentation and were perceived as highly difficult to control. These elements were reported by midwives who had witnessed or listened to an account of an event from a woman in their care, which suggests that there was a high degree of homogeneity in the characteristics of events perceived as traumatic, regardless of the way in which this was experienced.

2. Aspects relating to the organisational context

This second category of themes relates to the overall organisational context within which the traumatic perinatal event occurred. There are two themes within this category. The first theme relates to events where midwives reported difficulty accessing resources or personnel required within a situation. The second theme was identified only in the heard accounts, and includes events where mothers were left alone and isolated within the event. Therefore again, elements perceived as traumatic within accounts that were listened were influenced to a greater degree by the mother's situation within the event.

2.1. Access to resources or personnel limited or delayed (W and H)

Midwives described events where they perceived it to be difficult to access further help. This could be in the form of resources, such as theatre, or also in terms of personnel, for example where midwives required additional input from senior professionals. This emphasises a sense of being overwhelmed and feeling alone intrinsic to perceptions held about the event. Aspects causing the delay were sometimes attributed to a busy working context;

"Working on a night shift, 2 emergencies arrived at the same time. The lady in the next room delivered a vaginal breech that died whilst the lady I looked after needed to go to theatre APH, breech, previous C/S." [ID 316 W]

"Told by a woman whose care had been transferred to another unit due to preterm labour- she was trying to deliver in trolley outside labour ward due to lack of spaces - baby was subsequently stillborn due to lack of care. Was horrified when told of attitude of staff." [ID 364 H]

Access to further assistance was also limited in some instances due to the location of the birthing episode. For example, an adverse situation at a home birth or location away from hospital where the midwife was not only unable to access any further assistance, but where they were also facing a delay in transferring into hospital. Reports within this theme were primarily related to the inability to access resources as quickly as required, rather than the birth taking place in a situation away from hospital.

“Postpartum haemorrhage in a rural setting - no medical aid available.” [ID 154 W]

“Massive PPH at home - woman on own with baby - felt her life ebbing away whilst waiting for ambulance.” [ID 372 H]

2.2. The woman being alone (H only)

An aspect of events that were listened to by midwives and perceived to be traumatic related to situations where women described themselves as alone during the birthing episode and unable to access any help.

“Maternal collapse due to PPH following delivery. Woman wasn't 'seen to' for 5 minutes unable to reach call bell and on own in room.” [ID 19 H]

Summary

This category related to the overall context within which the traumatic perinatal event occurred. It highlights the impact of busy working environments and the physical location of the event impacting upon midwives' perceived ability to access resources or personnel when required. The only distinction within this category between witnessed events and accounts listened to from mothers in midwives' care was the additional component of the mother reporting being left alone within the birthing situation. This highlighted instances where mothers felt unable to access additional help when it was required. Therefore these extracts indicate the contribution that the working environment can have on perceptions of helplessness within a situation, which in turn contributed to perception of an event as traumatic. It also highlights perceptions of being 'alone' within a situation, overwhelmed and unable to access additional help.

3. Aspects relating to parents

There were four themes relating to parents identified within the described events; two of which were present within witnessed events and accounts that were listened to and perceived as traumatic. These were having an existing relationship with parents and supporting or delivering bad news to parents after the event. Within the first of these themes (having an existing relationship with parents), there was an additional subtheme identified only within the heard events, and this related to acknowledging the mother's circumstance. A third subtheme was identified only within events that were listened to by midwives as they were recounted by a woman in their care, and related to difficulty witnessing mother's distress. A fourth theme was identified only within the witnessed accounts, and related to instances where midwives reported a difficult relationship with parents during the birthing episode.

3.1. Having an existing relationship with parents (W and H)

Midwives described events where they had an existing relationship with parents prior to the event occurring. This included events where the mother was also a friend or a colleague of the midwife, or events where midwives had built a relationship through providing care prior to the birth.

"Caring for a close friend when she experienced an IUD at 24/40." [ID 54 W]

"Cared for a woman antenatally who days later subsequently died. I was absent at this time but because I had known her I was sickened by the events." [ID 245 H]

3.2. Supporting parents and delivering bad news (W and H)

Midwives described events where working alongside, conveying bad news and supporting families after adverse events increased or contributed to feelings of stress or anxiety. Within witnessed accounts this primarily related to instances where midwives provided support immediately after the adverse event, often breaking the news to parents themselves. Within the heard accounts, this related to midwives' experiences of supporting mothers following their experience.

"Discussing the demise of mother and neonate to the partner and father. The loss of your wife and child in the same day - and I am the midwife trying to make sense of the event not only to myself but to a partner 'beyond distress.'" [ID 439 W]

"Recovering a lady whose baby died at delivery under GA LSCS. It was my job to bring baby to her the next day her first visit with baby." [ID 70 H]

3.3. A difficult relationship with parents (W only)

Within the witnessed accounts, there was an additional theme relating to a perceived struggle within relationships with parents. This was divided into three subcategories; a perception of threat from parents, a perception of mothers failing to follow advice, and difficulty establishing communication through a language barrier.

3.3.1. Perception of threat from parents

Midwives reported a perception of threat from parents when their response to the event was angry.

“Difficult caring for women and families who become unwelcoming.” [ID 126 W]

3.3.2. Women not following advice

Some descriptions from midwives included reference to women not following advice during (or sometimes before) the traumatic birth event. Descriptions did not always infer blame to the mother however the perceived lack of cooperation provided an additional difficulty during a potentially adverse situation.

“A woman having a VBAC at home against medical advice who developed tachycardia and refused to go into hospital as she considered herself to be at low risk of uterine rupture.” [ID 326 W]

3.3.3. Difficulty with effective communication (language barrier)

Some descriptions of events suggested that a difficult situation was further complicated by difficulty communicating with the mother due to a language barrier.

“Death of a baby at term in labour. Mother spoke no English which was very stressful.” [ID 245 W]

3.4. Acknowledging the mother’s experience (H only)

An aspect of events only identified within the heard accounts related to midwives listening to mothers’ accounts of loss and their overall circumstance. This extends the theme of having an existing relationship with mothers, and identifies a potential difficulty for midwives when they were aware of the impact that the event had on women in their care.

“Personal circumstances such as physical abuse/ rape etc. followed by giving birth to their child.” [ID 42 H]

“Baby died in her arms within an hour of birth” [ID 397 H]

3.5. Witnessing parents distress (H only)

Due to the retrospective nature of heard accounts, midwives were often providing support for mothers as they recounted the severity of their distress during or shortly after the childbirth episode. Therefore a theme that was only identified within accounts listened to by midwives related to instances where women were distressed as they recounted the event to the midwife.

“Severe postpartum bleeding. Woman describe feeling as if she was out of her body. Looking down on doctor's working to stop blood.” [ID 351 H]

A patient had a very traumatic birth and then had a shoulder dystocia, the woman was very upset about the whole experience. [ID 386 H]

Summary

Aspects relating to parents highlight an additional source of difficulty for midwives, which are influenced by the bond held with parents and the nature of contact with parents during and after the birthing episode. Having an existing relationship with parents, and experiencing difficulty providing support and delivering bad news demonstrates the role of empathy in the relationships formed between midwives and women. This was slightly different for the events listened to and perceived as traumatic, as midwives had a different level of context to the event that was recounted to them. Here midwives were aware of the implication that the event held for mothers, and could witness the extent of distress caused for mothers as a result. Events that were witnessed in person included instances where midwives experienced difficulty within the relationships held with women. Therefore ‘witnessed’ events were focused upon the impact of the relationship during the birthing episode, whereas ‘listened to’ exposure also incorporated aspects relating to relationships after the event as well.

4. Perceived conduct of colleagues

This category included reference to concern over the skills or conduct of other colleagues within the birthing situation. There were four themes within this category, however only one

theme was identified across both witnessed accounts and accounts of event that had been listened to. This was the perception that interventions were conducted by another professional in an overly forceful manner. Two themes were identified within only the witnessed accounts, these related to the perception that the skills or abilities of other colleagues were limited or unsatisfactory, and that the midwife did not feel supported by colleagues within the event. A final theme was only reported within accounts that had been listened to from women in their care, and this related to a perception that the care provided to mothers by other colleagues was unsatisfactory.

4.1. Overly forceful interventions (W and H)

Some midwives reported witnessing or listening to events involving interventions that were implemented in a forceful way.

“A failed anaesthetic - for planned CS failure to intubate mother who GA reverted - had heard everything whilst all in theatre affirmed she was asleep. Brutal mid cavity forceps delivery- obstetrician managed to pull bed across the floor of LW.” [ID 410 W]

“Consultant obstetrician with her foot at the end of the bed to give her extra pulling power during an instrumental delivery!” [ID 237 H]

4.2. Perception that the abilities of colleagues were limited or unsatisfactory (W only)

A distinction in witnessed accounts was identified with midwives reporting concerns over the conduct of their colleagues. Midwives reported concerns that the conduct of their colleagues contributed to the outcome of an event, or the resulting wellbeing for the mother or her child.

“The delivery of a second twin by breech extraction with no analgesia for the mother or explanation or any communication from the Doctor followed by a PPH.” [ID 235 W]

“Incompetent doctor attempting resuscitation of baby - I ran to get another Doctor. Baby was handicapped I believe as a consequence of attending doctor at birth.” [ID 373 W]

4.3. Midwife not feel supported by other colleagues (W only)

Finally there was an aspect of events relating to midwives' perception of not being supported within the event. This involved events where midwives felt unsupported in general, and also events where midwives felt that their concerns were not listened to or upheld by other colleagues.

"Woman had IUD - newly qualified as a MW - had to escort to theatre when no progress 2nd stage - Dr had to decapitate baby - angry relatives waiting outside theatre, no support from LW sister." [ID 464 W]

"I did a CTG on a high risk mum 15 years ago. There was excessive fetal movement and then a severe bradycardia. All theatres busy and MD on duty queried my findings. Baby died after 2 hours after EMCS." [ID 236 W]

4.4. Perception that the care provided to mothers was inadequate (H only)

Within the events that were listened to by midwives from women in their care, there was also a perception that the mother had received care that was inadequate or potentially detrimental.

"Newly qualified MW relaying what happened (baby died - I was not on duty). No support for MW. Mother - relayed event (above) felt [care] inadequate for baby (who died) and felt no support from MW and knew MW had no support." [ID 72 H]

"Woman asking for help whilst in hospital staff not responding" [ID 210 H]

"Midwives being rude to patients not asking consent or explaining procedures." [ID 133 H]

Summary

This category identified aspects relating to midwives' perceptions of the conduct of other colleagues within a birthing situation. Both witnessed accounts, and accounts that were listened to and perceived as traumatic, reported difficulty with episodes involving interventions conducted in (what was perceived to be) an overly forceful manner. Witnessed accounts also encompassed midwives' perceptions of feeling unsupported by other colleagues, and instances where midwives felt the care provided to mothers was inadequate or potentially detrimental. This latter aspect was also identified within accounts that were

listened to, however these instances were focused more on the mother's experience rather than the midwife's perception of care as inadequate.

5. Aspects relating to blame and culpability

Aspects within this category related to midwives perception of being to blame for the event. This includes midwives feeling personally responsible for what happened. It also includes instances where midwives have felt that others (colleagues, family members) perceived that they were to blame for the event. There was also reference to the involvement of investigative procedures taking place following the birthing episode.

5.1. Involvement of professional investigation (W and H)

Descriptions of events from both types of exposure reported elements relating to the implementation of internal or professional investigative procedures. Therefore an element of the event perceived as traumatic extended beyond the birthing episode itself, and involved the experience of procedures that took place afterwards as well.

"Taking over care of pt in labour. Previous midwife had documented reassuring trace, baby had died what she was observing was maternal pulse. The grief of that family will live with me forever. Case went to GMC conduct comm." [ID 13 W]

"Fulminating PIH underlying renal condition, fitted at home, went in but baby dead. Unable to induce 32 weeks pregnant CS. My patient on community - knew her well. Several times case mishandled by GP's [...] locum GP implying care inadequate in hospital undermining patient's faith in hospital and interfering with grief process - all totally uninformed - very large, nasty, investigation." [ID 121, H]

5.2. Attribution of blame (W and H)

Events that had been witnessed or listened to from a woman in their care also involved the perception of blame and culpability about the event. Descriptions of events that had been witnessed involved the perception of midwives being blamed by other colleagues or women in their care. Some midwives also perceived themselves to be blamed for what happened.

When performing antenatal check at a lady's home and not being able to find a fetal heart beat. On arrival to the hospital the scan revealed the baby had died. The lady did not believe it and over the next few days blamed me for the loss [ID 446 W]

Labouring woman, night shift, thick mec on SROM, refused to be monitored until she had pethadine; pethadine withheld. EFM commenced --> fetal bradycardia, VE--> 8cm, only Doctor (Reg.) already in theatre with EMLSCS, senior MW panicking, and blaming me. [ID 462 W]

Haemorrhage of 5L, 5 hours in theatre to try and stop bleeding. I felt responsible as had been the midwife at the birth. [ID 117 W]

There were also aspects relating to the attribution of blame reported within events that were listened to as accounts from recipients of care, where mothers reported feeling blamed by other colleagues for the birthing episode. However there were also accounts reported by mothers where other midwives were blamed by other colleagues for the birthing episode.

“Midwives being asked to push the baby head up per vaginum at CS and ending up with a dead baby. Blame was put on midwives even though a consultant had asked them to do it.” [ID 294 H]

“A woman treated 'like a piece of meat' in the labour room. Disrespected, not listened to, nothing was explained. Blamed for needing a forceps delivery because wasn't pushing well enough!” [ID 206 H]

Summary

The attribution of blame and involvement of investigative procedures described within the events highlighted the potential for aspects occurring after a birthing situation to impact upon midwives' perception of the event as traumatic. Attribution of blame was reported as involving the midwife themselves (personal perception of culpability), and instances where blame was attributed to other colleagues or the woman.

6. Personal salience (W only)

The third category was only reported within witnessed accounts and related to elements of personal salience within situations described by midwives. This category includes three themes relating to the perceived impact of personal experience in the profession, perceptions of responsibility during the event, and personal identification.

6.1. Limited professional experience

Midwives described instances where they were newly qualified, or had not long been working within a particular clinical area. This is indicative of midwives' perceiving their limited time in the profession, or within a clinical area, as an additional source of difficulty within the event.

"During 2nd shift as newly qualified midwife (night shift) - catastrophic PPH [...]. L/W coordinator berated me for not documenting events contemporaneously, (done in retrospect). Wrote resignation after that shift, it took my husband to point out it wasn't my fault." [ID 331 W]

6.2. Feeling 'responsible' for the provision of care

Within some descriptions midwives described their position within the event as personally and directly responsible for the provision of care. This highlights an element of perceived pressure within the event for the midwife.

"Cord prolapse. I was midwife number one caring for woman and discovered prolapsed cord." [ID 101 W]

"Cot death on postnatal ward where I was in charge." [ID 374 W]

6.3. Personal salience of the event

There were also elements of personal salience within the events, either because midwives were also pregnant at the time or because the content of the event was salient for the midwife, for example when it was the first experience they had of that nature.

"Looking after a colleague in labour diagnosed a 'cord prolapse' baby stillborn. I was heavily pregnant at time of incident." [ID 36 W]

"I attended a homebirth 20 minutes before a stillbirth - the baby had been dead for 36 hours but this was not known. I was alone with the couple - my second decided there was 'no need for her to attend'! It was my first homebirth and she was one of my caseload." [ID 362 W]

Summary

Midwives reported being newly qualified at the time of the event, or pregnant themselves. There were also instances where midwives felt responsible for the provision of care within

an adverse birthing situation, which suggests an aspect of pressure placed upon them. This category identifies an aspect determining the perception of an event as traumatic that applied only to events that are *witnessed* in person, not when listening to a retrospective account.

CHAPTER 5. A qualitative investigation into the experience and perceived impact of traumatic perinatal event exposure in midwives (Study 2)

This chapter will outline findings from the interview study, conducted with a selected sample of midwives from the postal survey. The purpose of this study was to explore in further detail midwives' experiences of traumatic perinatal events. After establishing within the questionnaire survey that a) midwives had experienced events encountered throughout their work as traumatic and b) that some midwives experienced PTS symptoms in response, this interview study aimed to provide an in-depth investigation into the experience, perceived impact and management of responses in midwives with high and low levels of distress. This chapter will begin by outlining the aims of the interview study. Details of the selected sample are then provided, before a presentation of themes arising from the analysis of interviews.

1. Aims

To further midwives' experiences of traumatic perinatal events, taking into account details and responses experienced within the event, initial response afterwards, impact and the use of supportive strategies.

Secondary aims

1. To explore the nature of the events perceived as traumatic by midwives
 - Details of what these events were (what happened, how it concluded)
 - Who was involved and their role within the event
2. To explore in further detail any responses and subsequent impact experienced by midwives
 - Initial responses to the event (actions and emotions)
 - Effects experienced after the event
 - Extent to which these responses affected the participant personally/professionally (on a more long-term basis).
3. To explore what helped midwives afterwards
 - How the participant personally managed the responses they were experiencing and how effective this was
 - The experience of organisational support in managing responses
4. To encourage participants to reflect on their experiences
 - Whether anything changed after the event (either professionally or personally)

- How thoughts and feelings may have changed since the event (and why)

2. Participant details

Midwives were aged between 23 and 59 years ($M= 46.66$, $SD= 6.93$) and had been qualified between 6 months and 34 years ($M= 18.87$, $SD= 9.75$). The majority had a Bachelor's degree (or equivalent training for registered midwife status; $n= 24$, 69%) and were married ($n=29$, 83%). Most of the midwives interviewed had children of their own ($n=33$, 94%). Nearly sixty percent had personally experienced a traumatic event in their lifetime ($n= 20$, 57%) and just over a third perceived a personal experience of giving birth to have been traumatic ($n= 12$, 34%). As displayed in table 5.1, the demographic details of midwives in the high and low distress group were highly similar.

The majority of midwives were currently working in clinical practice ($n= 34$, 97%) and were employed by the National Health Service (NHS) ($n= 32$, 91%) and working at Band 6 level ($n= 23$, 66%). A predominant proportion of the sample reported to be currently working within a hospital environment ($n= 23$, 66%) providing midwives worked in several areas concurrently. Table 5.2 displays further details about the professional designation of midwives in the sample.

All midwives were qualified and had experienced at least one traumatic perinatal event corresponding to criterion A of the DSM-IV for PTSD (APA, 2000) throughout their professional career ($M= 23.06$, $SD= 19.61$). The majority of midwives had both witnessed and listened to accounts that they perceived to be traumatic ($n=32$, 91%). There was a similar level of total exposure to traumatic perinatal events in the high ($M= 24.69$, $SD= 13.50$) and low distress groups ($M= 21.68$, $SD= 23.88$) although the low distress group reported a greater variation in the number of total events experienced (from 5 to 54 in the high distress group and from 2 to 108 in the low distress group). Further details are provided in table 5.3.

Table 5.1 Demographic details for midwives included within the interview study (n=35)

	High High (n=16)		Low Low (n=19)	
	Mean (SD)		Mean (SD)	
Age (M, SD)	46.25 (9.26)		47.00 (4.37)	
Years Qualified (M, SD)	18.50 (10.95)		19.18 (8.92)	
	N	%	N	%
Gender	16	100	18	95
Female				
Male	0	-	1	5
Education				
Bachelor's	7	44	5	26
Master's	1	6	2	11
Registered Midwife/ SCM	5	31	7	37
Currently in education	1	6		
Diploma	2	13	4	21
Advanced qualification	-	-	-	-
Marital Status				
Single	2	13		-
Married/ Cohabiting	13	81	16	84
Widowed	1	6	3	16
Divorced/ Separated	0	-	19	-
Parity				
Nulliparous	2	13	0	-
Primiparous	0	-	2	11
2 children	7	44	9	47
3 children	4	25	4	21
4+ children	3	18	3	16
Trauma History				
Personal trauma history (general)	10	63	10	53
Personal childbirth trauma history	5	31	7	37

Table 5.2 Professional designation for midwives included in the interview study (n= 35)

	High (n=16)		Low (n=19)	
	N	%	N	%
Currently practicing clinically (yes)	15	94	19	100
Employer				
NHS	15	94	17	90
University	-	-	1	5
Self Employed	1	6	-	-
Multiple	-	-	1	5
Band				
5	1	6	-	-
6	10	63	13	68
7	3	19	5	26
N/A	1	6	1	5
Currently working as*:				
Hospital midwife	10	63	13	68
Community midwife	5	31	4	21
Integrated practice	2	13	4	21
Team manager	-	-	2	11
Midwifery Educator	1	6	1	5
Involved in care around*:				
Antenatal	4	25	4	21
Intrapartum	11	69	13	68
Postnatal	6	38	-	-
Community	8	50	5	26
Other (midwifery led care)	1	6	4	21

**Percentages not mutually exclusive*

Table 5.3 Extent of exposure to traumatic perinatal events and mean symptom scores for midwives included in the interview study

	HH (n=16)		LL (n=19)	
Extent of exposure	N	%	N	%
Witnessed and listened to (Y)	15	93	17	90
	Mean (SD)		Mean (SD)	
Frequency of exposure				
No. witnessed (over career)	8.06 (9.46)		8.61 (8.99)	
Range	1-40		1-30	
No. listened to (over career)	19.00 (13.09)		17.13 (24.30)	
Range	2-50		3-100	
No. experienced (over career)	24.69 (13.50)		21.68 (23.88)	
Range	5-54		2-100	
Symptomatology				
Total IES-R score	57.56 (12.78)		15.11 (6.34)	
SDS mean score Work	6.94 (1.06)		1.63 (1.07)	
Social	7.12 (1.54)		.95 (1.18)	
Home/family	7.69 (1.58)		1.37 (1.21)	

3. Presentation of themes

The four sections of the template provided a tool for structuring and describing the temporal sequence of midwives' traumatic perinatal experiences. The first section, 'event characteristics,' included aspects relating to the context and content of the traumatic perinatal event, and has four themes. The second section, 'initial response and impact,' has seven themes and includes aspects relating to the initial response and perceived impact of the event over time. The third section, 'helpful aspects and use of support' has six themes and includes aspects perceived to be helpful (or unhelpful) following the event, and midwives' use of supportive strategies. The fourth and final section, 'reflective statements', has five themes and includes midwives' perceptions of change in their responses over time, and reflections about their experiences of trauma in general.

Elements from each theme were reported in both groups. Therefore findings from both groups are presented together. Shared subthemes are presented first. Shared subthemes with variations in the nature of corresponding evidence for each group are then presented. Additional dimensions that were unique to just one of the groups are presented last. An

overview of the template is presented in a table at the beginning of each section. **Bold** typeface is used to denote aspects identified within the high distress group only, and *italic* typeface is used to denote aspects identified in the low distress group only.

3.1. Section one: Event characteristics

The first section included aspects relating to the context and content of the traumatic perinatal event and consisted of four themes (table 5.4). Three themes included aspects from both high and low distress groups; ‘being unable to predict and unable to control the situation’, ‘responding to the outcome and implication of the situation for the parents’, and ‘managing feelings.’ An additional theme was identified within the high distress group only; ‘feeling psychologically and physically alone.’

Table 5.4 Final template for category 1: Event characteristics

Theme: Event Characteristics	Subtheme	Nodes
1. Being unable to predict and unable to control the situation	1.1. “Suddenly, and without warning we were faced with an emergency situation”	
	1.2. Being out of your comfort zone	1.2.1. Not being confident in abilities 1.2.2. This had never happened to them before 1.2.3. Not knowing what to expect or do
	1.1. Being unable to control or improve the situation	1.1.1. Being unable to control or improve situation 1.1.2. Everything went wrong 1.1.3. Frustration over the time taken to act 1.1.4. Unable to access resources or personnel
2. Responding to the outcome and implication of the situation for the parents	2.1. Having an existing relationship with the mother increasing difficulty*	
	2.2. Buffering the impact of the event	2.2.1. Trying to reassure, managing information and what the parents saw 2.2.2. Trying to communicate knowing the mother couldn’t easily understand what was happening (HH) 2.2.3. <i>‘Not knowing what to say’ difficulty breaking bad news (LL)</i>

	2.3. <i>Acknowledgement of the parents' loss and recognition of the implication (LL)</i>	
	2.4. Feeling upset at the outcome and having difficulty witnessing parents in distress (HH)	
	2.5. A 'fraught relationship' with women/ partners (HH)	2.5.1. Fearful of the parent's reaction 2.5.2. Having to go against the wishes of the mother (cooperation)
3. Managing feelings	3.1. Holding in feelings to appear calm and professional	
	3.2. Going into 'auto-pilot' during the event	
	3.3. Managing responses and carrying on afterwards	<i>3.3.1. Maintaining a stiff upper lip (just carrying on) afterwards (LL)</i> 3.3.2. Struggling to carry on after the event (having to remain professional (HH))
4. Feeling psychologically or physically alone	4.1. Being (or feeling) unsupported	4.1.1. Being left alone during the event 4.1.2. Not confident the abilities of other members of staff
	4.2. Disagreeing with the decisions of other members of staff	
	4.3. Not being heard (nobody listening)	

Note: Bold= HH group only, Italic= LL group only

1. Being unable to predict and unable to control the situation (HH & LL)

The first theme within this section related to a sense of being able to predict events when they occurred, and being unable to control or improve situation once they had arisen. This theme had three subthemes; *events occurring suddenly and without warning*, being out of your comfort zone, and *being unable to control or improve the situation*. Both groups reported each subtheme.

1.1. Events occurring suddenly and without warning

The onset of the traumatic event was described to be sudden, developing quickly in the absence of any prior warning.

“It was very, very quick. We actually thought that she had improved when she was holding the baby and then all of a sudden then she started to go downhill. This is the way it happens with an amniotic fluid embolism- that this is the quickness of it.”
[ID 296, HH]

“You know, you can get help in but when it is unexpected and everything’s been so low risk and low key and then it goes from joy to utter trauma and devastation in the flick of a coin I think you’re just – I just remember feeling like I’d been thrown against the wall.” [ID 40, LL]

Here, midwives described difficulty encountering events where a seemingly ‘normal’ birthing situation quickly deteriorated.

“When the baby was born I thought that the baby was a still born baby, there was actually no sign of life in the baby at all. So it was, the suddenness- as in it was probably within the space of about 20 minutes to half an hour that the whole scenario had completely deteriorated and we were potentially seeing a fresh still born baby being delivered.” [ID 10, HH]

The following comment was made by a midwife from the low distress group. They described an event involving an unexpected neonatal death on postnatal ward. The baby was found later to have structural abnormalities, however the midwife recalled it being difficult at the time, partially because of the lack of warning and also because the nature of the event itself was unusual for the area they were working in.

“This is not something that happens commonly on a postnatal ward and we had support workers there as well so one of them I think put out the emergency call and we began resuscitating this baby feeling very sort of panic stricken at first, you know, in taking – in delivery you expect to be resuscitating babies don’t you, but not on a postnatal ward.” [ID 391, LL]

1.2. Being “out of your comfort zone”

There was an underlying sense of working ‘out of a comfort zone’ within the traumatic events. This involved situations where midwives had limited confidence in their abilities or where they were uncertain about what to do. Some of these feelings were attributed to the

‘newness’ of the situation, where midwives had no prior experience encountering an event of a similar nature.

1.2.1. Not feeling confident in abilities

Midwives reported questioning their judgement or abilities within the situation, and feeling low in confidence. Being new to the profession and adjusting to practising without a mentor were cited examples of this;

“...because I was a Band 5 midwife at the time I was newly qualified and when you're a student midwife you always have a midwife working with you and to suddenly be on your own in a situation that you really don't feel comfortable in.”
[ID 433, HH]

There were also instances where midwives felt unfamiliar with the clinical area that they were working in having spent a period of time working in another environment;

“I think you question your ability don't you, unless you've been a Community Midwife and coming back in to the hospital for your yearly updates, home births are one thing you know, you're confident in that area but then coming back in to the hospital where you're a little bit out of your comfort zone although I'd only been on the Community probably about 2 years at that point, and I suppose questioning your ability more than anything.” [ID 428, LL]

Or situations where midwives assisted in clinical tasks that they felt were outside their usual role;

“I ended up assisting in the section which... wasn't of my remit [laughs] - so to speak - as a midwife. I did ask the co-ordinator of the actual delivery suite to ring the supervisor of midwives at the time, while it was all going on, and to see if it was ok to do - because I've never done anything like that before you know, and I'd only scrubbed as a student, so it wasn't like I was out of my scrubbing competencies or anything like that.” [ID 316, HH]

1.2.2. This had never happened to them before

Midwives reported events that they had never encountered before, which contributed to feeling ‘out of their comfort zone.’ For example, encountering complications that they had never witnessed before;

“I took the baby so I was the midwife that took the baby, you- and the baby was white. I had never seen a baby like this before, because it was so- the baby had haemorrhaged, and it was absolutely white.” [ID 108, HH]

“I’ve never been in theatre with such prolonged resuscitation and I certainly have never come across and I don’t think any of my colleagues have come across a transfusion being performed on a baby in theatre. I mean I’m sure it’s happened but in the 15, 17 years of my career I’ve not come across that.” [ID 223, LL]

There were also situations that were more severe in nature than anything they had encountered before;

“It was just these huge clots just pouring out of her like one after the other you know I just never had experienced that with that kind of level of pain and you know they were just like the size of dinner plates coming out.” [ID 415, HH]

“I mean don’t get me wrong I’d seen babies die before. I’ve delivered dead babies. But nothing – not – you know an unexpected stillbirth at delivery at term and it is so phenomenally rare and most midwives go through their careers and they will never ever witness it, never mind be the delivering midwife.” [ID 387, LL]

1.2.3. Not knowing what to expect or do

Being uncertain about the cause of the event was reported as difficult;

“It was like, oh god you know. Is this why she’s bleeding like this? You know -why is she having this huge bleed? What’s it about?” [ID 415, HH]

“You just hope you never have to see that again because it’s just so – you’re whole body just goes she’s going to die and at that time you don’t know what has happened to her because all the obstetric emergencies that we know can happen this one wasn’t fitting in the bill at all it wasn’t fitting into any of the characteristics of what we would expect.” [ID 108, LL]

In addition to this, being uncertain about the best course of action to take was perceived as difficult and contributed to midwives' distress.

"And I mean I just... oh god even talking about it now. At that time I was so wracked with guilt and so just... powerless. I felt helpless." [ID 358, HH]

"I didn't even know if it was significant. I didn't even know if that was a problem because I have been at a section before where the cord snapped at the base and the baby had bled and the paediatrician- because the APGARs good- the paediatrician refused to take it to NICU, whereas we were all saying no you need to take it to NICU and you need to keep an eye on it because we don't know how much blood its lost, but they were fine about it. So I was a bit like not really sure." [ID 223, LL]

1.3. Being unable to control or improve the situation

A third subtheme related to perceptions during the event that the situation could not be controlled or improved. Comments within this subtheme included perceptions that attempts to control the event being ineffective, and complex events where it seemed that 'everything was going wrong.' There were also references to the inability to control or improve the situation due to having only limited access to required resources or additional personnel, or facing a delay for treatment to be implemented.

1.3.1. "Everything was going wrong"

Events were often complex, with multiple difficulties arising simultaneously or sequentially. This contributed to a perception of 'everything going wrong';

"...because of everything that had happened one of the doctors was trying to do a cord traction for the placenta so they could suture the episiotomy and everything else and the cord was cut and then the lady had to go to theatre anyway for manual removal of the placenta, so everything kind of went wrong." [ID 316, HH]

"I mean I always feel when some traumatic event happens in you know in maternity is again like a snowball you know it's not one things its loads of other things" [ID 172, LL]

1.3.2. Being unable to control or improve the situation

Midwives reported situations where, despite best efforts, attempts to control the situation were ineffective.

“And there was nothing we could do to improve the situation really. And so because you’re monitoring you’re hearing the heartbeat all the time it’s just constantly being... you’re hearing it and you’ve done all the sort of procedures you’re meant to do to help but really what we needed was to get the baby out. And we couldn’t do that in any way.” [ID 251, HH]

“It got stuck and we did everything we could but by the time we got the baby out it was too late. Extremely horrific I have to say. And even having seen them before I’ve never actually been on site when we’ve actually had one that bad. So it was very traumatic.” [ID 25, LL]

1.3.3. Frustration over the time taken to act

Some events also involved a delay in implementing interventions for further treatment. As midwives were unable to implement treatment themselves, this left them feeling frustrated over the perception of time being wasted when there was an urgent need to act quickly.

“I just wanted to shout ‘for God’s sake just get the baby out.’” [ID 129, HH”]

“I felt really frustrated that you know why we were waiting you know the baby was just going to be more and more danger the longer it was left. And the feeling I was left with after is that I sort of took the consultant’s word for it and that’s what plays on my mind. I constantly go over in my head and still now think why didn’t I say to him you know would you make that decision if it was your wife? That sort of feeling and I sort of regret that I hadn’t pushed it further really.” [ID 207, LL]

1.3.4. Unable to access resources or personnel

A final aspect contributing to feelings of being unable to control a situation was a perceived difficulty in accessing additional resources or personnel when required. This included events where midwives urgently needed to transfer a mother to hospital but faced a delay for the ambulance arriving;

“She was coming up to second stage and the fetal heart went down to seventy. It was her first baby she was in a flat. And we rang for- we needed to transfer her into

hospital- it was a Saturday evening. We rang for an ambulance and we were told it would be at least twenty minutes. So we were listening to this heartbeat going very, very slowly.” [ID 10, HH]

“And it’s one of those situations where I think because we are like 20 miles or half an hour away from the main centre it’s always a bit of a concern especially when you don’t know who you’re looking after as well. There’s no actual medical help at their birth centre [laugh]. It’s just a birth centre there’s no other sort of back up at all.” [ID 294, LL]

There were also events where additional personnel were not available, as illustrated in the first extract below where an emergency caesarean was required but there was a delay for the arrival of the anaesthetist.

“We were all there scrubbed in theatre and basically it was- we were there for twenty-nine minutes. And it was just horrendous, you know. And we knew this baby had died, and we just were helpless you know, we couldn’t do anything about it all.” [ID 203, HH]

“Eventually the head did deliver after a lot of effort from mum and us, and then obviously the shoulders didn’t. I mean the first thing you do is call for help because you don’t know how long this is going to go on for – which we did. I work in a midwifery led unit so there are not any doctors or paediatricians on our level. [...] So we put out a crash call, and in the meantime we obviously need to do what we can.” [ID 40, LL]

Being unable to access the required help contributed to a sense of helplessness;

“I almost may as well have been, you know, in the supermarket.” [ID 320, LL]

2. Responding to the outcome and implication of the situation for parents

There were four themes identified that related to the role of the parents within the situation. This theme emphasised the impact of the relationship held with parents, the nature of communication, and the perspective held by midwives about the meaning of the event for parents. There were two shared subthemes; ‘having an existing relationship with parents increasing difficulty’ and ‘trying to buffer the impact of the event for parents.’ The third

theme highlights a distinction between groups in the appraisal of the event and the implication for parents. Midwives with high levels of distress reported feeling personally upset by the event and from witnessing parents' distress. Midwives with low levels of distress reported feelings of sadness rather than personal upset. A fourth theme represents an additional dimension only identified within the high distress group, where midwives described experiencing a 'fraught relationship' with mothers and parents.

2.1. Having an existing relationship with the mother increasing difficulty

Having an existing relationship with the mother was perceived to increase midwives' vulnerability when adverse events occurred. Relationships were built whilst providing care for a previous pregnancy, providing antenatal in addition to intrapartum or postpartum care, or having spent time with the parents prior to the birth. This is illustrated by the extract below, where an association between knowing the mother and experiencing a greater level of grief when the mother's baby was stillborn;

"Even though, you know, you're at work and it happens to lots of other people it made it much worse because I knew them. That's terrible to have sort of levels of grief but you just, well, you do feel worse for people that you know- when you're involved in it and you know not just professionally definitely makes a difference. [...] Oh I was devastated. I was just devastated for them both, terrible sense of shock and just disbelief really, I couldn't believe that it had happened, it sounds silly but it doesn't happen to people you know, do you know what I mean?" [ID 454, LL]

The extract above identifies how having a relationship with the mother may enable adverse situations to be identified with on a personal as well as a professional basis. However, midwives did not view having a relationship with the mother as a negative aspect of their practice, and many felt that it enhanced the level of sensitive care that they could provide;

"But then maybe because I knew her so well that was my instincts then, I knew something was wrong, because I knew her. Do you know how sometimes when you know somebody, you are more sensitive to them?" [ID 207, HH]

2.2. Trying to buffer the impact of the event

Extracts included in this subtheme related to midwives' attempts to lessen the impact of the event for parents. Strategies used included providing additional support and reassurance for parents, managing the information that is relayed and attempting to manage the visual scenes

that parents were exposed to. This involved efforts made by midwives to reassure parents and manage the information relayed to them. Within the high distress some midwives also reported managing the visual scenes that parents were exposed to in addition to the information that was provided to them. However as this distinction was only small, it was incorporated into the shared subtheme. Two final subthemes identified distinct components between the experiences in either group. A distinct subtheme related to midwives with high levels of distress reporting difficulty communicating with mothers. The last subtheme was identified only within midwives with low levels of distress. This related to the difficulty experienced by midwives in breaking bad news with parents.

2.2.1. Trying to reassure parents (managing information)(HH and LL)

A common theme across both groups were the attempts made by midwives to buffer the impact of the event for parents by providing reassurance, despite having their own concerns about the situation;

“I had anxieties because obviously the woman was anxious. I’m trying to calm her down and reassure her at the same time.” [ID 129, HH]

“She was very, very frightened. Very, very upset and I was trying to reassure her but I couldn’t reassure her fully because I too thought that the outcome may be very bad.” [ID 207, LL]

Midwives with high levels of distress also report managing parents’ exposure to potentially upsetting scenes in the high symptom group;

“The woman when she, she didn’t want to see the twins to start with and I was trying to make sure that I’d got them covered up so that the parents couldn’t see them.” [ID 433, HH]

2.2.2. Trying to communicate knowing the mother could not easily understand what was happening (HH only)

An additional source of distress for midwives in the high distress group was the perceived inability to effectively communicate with mothers. This caused concern over whether mothers fully understood what was happening.

“The woman herself really could not understand, everything had to be explained to her in very simple terms and I don’t think she really understood the full picture, either during the labour or when the baby was born or subsequently, you know, after the baby was being resuscitated- she just looked completely bewildered and completely shocked and upset and distressed but couldn’t really express herself properly.” [ID 15, HH]

2.2.3. Breaking bad news, “Not knowing what to say” (LL only)

Midwives with low levels of distress reported difficulty breaking bad news to parents, especially when parents were highly upset:

“...the absolute worst bit was walking back into that room with that dead baby in my arms and telling the parents. Now the doctor wanted... said he would do it and I said no I would do it because you know it was me they had the relationship with, I’d been the midwife and that was just the worse thing I’ve truly ever done. And that woman’s scream will live with me forever.” [ID 40, LL]

2.3. Recognition of the event and response to parents’ distress

There was a distinction in the appraisal and response to the event’s outcome and implications for parents reported by either group. Midwives with low levels of distress acknowledged the extent of the impact, and expressed sadness over what happened. However midwives in the high distress group reported more acute responses of emotional distress, feeling personally upset by the event and after witnessing parents’ distress.

2.3.1. Acknowledgement of parent’s loss and recognition of the implication of the event (LL only)

Midwives with low levels of distress reported acknowledging the impact of the parents' loss and the implication this held. However this acknowledgement was suggestive of recognition independent of personal upset.

“Just that, ‘oh god what a waste of a’ – you know cause he was such a perfect little baby – what a waste of a little life.” [ID 172, LL]

In addition to this, midwives reported an enhanced sense of identification with a situation due to a similar experience of their own. For some this was based on having experienced a similar adverse event;

“I suppose for me the first thing I thought of when I lifted him to my face, was my experience when I lost my own baby in as much as that coldness. [...] With myself I didn’t know I was going to have a stillbirth - it was a fresh stillbirth - but I still remember when they delivered [name of participant’s child] onto me he felt very cold to touch and this is what this baby felt like. It was very, very cold his face.”
[ID 172, LL]

However, this was not an upsetting connection to make and midwives felt that identification with a personally traumatic event facilitated their care for mothers by providing greater insight into their needs.

“I really connected with the woman, yeah brilliantly. I was able to give her really, really more care than what you would normally do.” [ID 335, LL]

2.3.2. Feeling upset at the outcome and having difficulty witnessing parents in distress (HH only)

Midwives experiencing high levels of distress reported feelings of personal upset at the outcome or implication of the event. Compassion and empathy for parents’ situations transpired into personal feelings of upset.

“I think it’s always upsetting and I think you go into that job because you’re a caring person so the fact that you’re watching someone so grief stricken and you know what the implications of losing a child on the family are I think it’s overwhelming the upset you feel and you know all the feeling of ‘if only I could go back half an hour’... ‘What if’... ‘What if I’d have done something differently?’” [ID 129, HH]

2.4. A fraught relationship with the parents (HH only)

Only midwives with high levels of distress reported difficulty in their relationship with the mother. This involved instances where midwives had to contradict the wishes of mothers in order to act safely and quickly in response to a serious medical threat.

“I remember saying to her you know you’re losing too much blood I need to give you some drugs. She said no I don’t want to I want my homeopathy. And said I

really need to use the drugs there's too much blood loss. And then a third clot came out." [ID 415, HH]

There were also instances where midwives felt fearful for the responses of parents and wider family members following adverse incidents.

"If you are the person looking after them you're the focus. They associate you with what happened and you're the focus of – they could be angry with me for example. You never know how the person's quite going to react so you're on edge and anxious thinking ok how's it going to be? Things like extended family members coming in you know. Her parents for example being angry with me. Who was it looked after you? I want to see the midwife. It's, you know, a feeling of physical fear of how you're going to be treated." [ID 129, HH]

3. Managing personal feelings (HH and LL)

Both symptom groups reported a need to manage their feelings and personal responses during the event and reported two strategies to do this; 'holding in feelings to appear calm and professional', or overriding feelings and 'going into auto-pilot.' However there was a distinction in the way midwives managed their feelings after the event. Midwives in the low group reported being able to 'maintain a stiff upper lip' and continue to function in autopilot. Midwives in the high distress group struggled to carry on in their work whilst recovering emotionally from the event they had just encountered.

3.1. Holding in feelings to appear calm and professional (HH and LL)

There was an acknowledgement within midwives in both symptom groups that displaying personal feelings of panic and concern was not appropriate when in their professional role. Midwives reported attempting to hide, cover up or ignore how they felt in order to maintain a calm, professional appearance. This strategy of hiding feelings to appear professional was indicative of a struggle between personal feelings and the requirement to appear in a specific way.

"...you have to maintain an air of professionalism when you're at work so everything kind of comes out when you're not there because you have to – I mean I don't think you can never be upset in front of parents. I'm not saying you should never well up in front of a parent but actually your responsibility is to look after

them not make them feel any worse than they feel already. So I think you hold it in all the time you're at work." [ID 129, HH]

"I did inside go- not into a panic but- I'm one of these that no-one would ever know that I would panic but inside I was thinking oh my god!" [ID 172, LL]

3.2. Going into 'auto pilot' during the event (HH and LL)

Another strategy reported was to override feelings and to revert to training procedures. This strategy, often reported as **'going into auto pilot'** suggested that some midwives did not struggle with emotions-they were able to bypass 'feeling' in favour of 'doing.'

"You didn't have time to take stock of what was happening - the whole situation that was happening at the time -because you're still dealing with the emergency." [ID 316, HH]

"I think when it, in an emergency situation like that when you've got a job, something to do and you're running round and you're getting them out of a delivery room and into theatre and you're getting all the right staff there and getting the right equipment you kind of get on with it really without sort of thinking too much about it, you just, you go in to overdrive almost to get the baby delivered and the mum safe...." [ID 454, LL]

3.3. Struggling to carry on after the event (HH only)

Midwives in the high symptom group reported a struggling to carry on in their duties after the event;

"As soon as something happens you're asked to write down as contemporaneously -is the big word they use- as possible, from memory what happened but because the way it spins you personally into, it's a spiral that happens emotionally, you're a spinning top, you can't really have a conversation, I don't think I was capable of having a conversation you know, until maybe after a week." [ID 242, HH]

3.4. 'Maintaining a stiff upper lip' (LL only)

The low symptom group however did not report a struggle in continuing after the event. These midwives were able to **maintain the ‘auto pilot’** used during the event, in order to carry on with the tasks that needed doing.

“I obviously had to tidy up and carry on with the clinic. So in that first hour or so of just continuing with the clinic that automatic pilot cut in - and obviously I’m middle aged I’ve been in this field for 30 years, so perhaps that enabled me to just carry on like that.” [ID 320, LL]

4. Feeling psychologically or physically alone (HH only)

An additional dimension in the perceived experience of a traumatic perinatal event was only identified within the high distress group. There was a perception of being isolated during the event, and this related to either psychological (disagreeing with other colleagues, not being listened to) or physical (being left alone) isolation.

4.1. Being (or feeling) unsupported

Midwives described a sense of being unsupported within a situation, either through being left alone or through questioning the capability of some of their team to possess the abilities they would require within the situation.

4.1.1. Being left alone during the event

An aspect of feeling physically alone related to instances where midwives were unsupported and left alone throughout the event when they felt they needed someone else there. This is illustrated in the extract below where a midwife described being left alone by an obstetrician when they had serious concerns about the mother in their care;

“Just holding a scanner and listening to the baby’s heart just slipping away and thinking where is everybody? Why have they left me?” [ID 358, HH]

4.1.2. Not confident in the abilities of other members of staff

Midwives also reported instances where they were not confident in the skills or abilities of other members of staff, resulting in feelings of being psychologically alone within the situation.

“I felt... you know when you’re working with a good crew and you feel completely confident in your own abilities and that you’re well supported? At that particular

time I was more sort of like feeling ugh out of my depth a little bit in terms of support.” [ID 316, HH]

4.2. Feeling psychologically alone during the event

Feelings of isolation were also elicited through perceiving themselves to be psychologically alone within the situation. Factors contributing to this included disagreeing with other members of staff and not feeling ‘heard’ by other members of their team.

4.2.1. Disagreeing with the decisions of other members of staff

There were also reports of disagreeing with other members of staff about decisions made in relation to the care provided to a mother;

“When I got there they hadn’t phoned the ambulance. So I was totally shocked. And I said to them- where’s the ambulance – ‘oh we waited to see the whites of your eyes before we phoned the ambulance’ because they didn’t want to go on the transfer. So this woman has got a huge tear, is at risk, and they’re not- they should have taken her there and I could have met them there.” [ID 203, HH]

4.2.2. Not being heard

Instances were reported where midwives felt that they were not listened to within the situation, or where their calls for concern were disregarded or ignored. This sometimes involved a sense of ‘being low on the hierarchy.’ This is illustrated further in the example below, where the midwife attempted to raise awareness of a situation they believed required attention but felt dismissed by senior medical colleagues;

“I felt as if I was... quite low... my knowledge and experience weren’t being taken into consideration. I felt kind of lowly on the part of the decision making process. So I was like the bottom of the pile really. I felt like I was the least important person whose opinion counted. You know I felt that my opinion didn’t really count for much.” [ID 129, HH]

Summary: Event characteristics

There was a distinct profile in the presentation and nature of perinatal events perceived as traumatic by midwives, regardless of the current level of distress. Events were complex, unexpected, and involved complications that were outside the realms of midwives’ previous

experience. There was a struggle to implement treatment as timely as desired, and sometimes efforts to improve the outcome were difficult or ineffective.

Having an existing relationship with the mother was perceived by both groups to increase vulnerability for midwives to the situation. Midwives were concerned about the impact of the event on mothers, and attempted to lessen the impact where they could. Midwives reported feeling distress whilst caring for mothers, but felt there was a requirement to manage their feelings to appear calm and professional.

There were some distinct features of event characteristics reported by either group. Midwives with high levels of symptoms recalled events where they were isolated and felt alone. There were also reports of a difficult relationship with parents, or a struggle in communication to mothers. Midwives in the high distress group felt personally upset about the event and after witnessing parents' upset. After the event, midwives struggled to maintain the suppression of their feelings in further work-related tasks. These aspects suggest presence of a personal and emotional connection between midwives with high levels of distress and the traumatic perinatal situation. Midwives in the low distress group didn't become upset by the experience or by witnessing parents' distress, although they did acknowledge the sadness of the implication and expressed difficulty over breaking sad news. Midwives with low levels of distress were also able to suppress their feelings after the event in order to continue with work-related tasks.

3.2 Section two: Initial response and impact of the event

Aspects included within this theme related to midwives' descriptions of how they felt or responded immediately after the event, and the impact that the event held for them on a more long-term basis. Initial response to the event was largely emotional, and included feelings of shock and distress. There are six themes within this section. Four of these relate to initial responses to the event (emotionally distraught, feeling vulnerable, self-blame and guilt and trying to make sense of the event). The latter two relate to the impact of the event (this event permeated everything, an enduring psychological impact). Table 5.5 provides an overview of themes and subthemes within this section. As before, bold font indicates an aspect only identified in the high distress group, and italics denotes an aspect only identified in the low distress group.

1. Initial emotional response

The first subtheme related to the initial emotional response reported by midwives. This consisted of three subthemes. Both symptom groups reported ‘Emotional exhaustion and despair,’ and ‘going into (and feeling) shock.’ The final subtheme, feeling ‘personally bereaved,’ was only reported by midwives with high distress.

Table 5.5 Final template for category 2: Initial response and impact

Themes: Initial response and impact	Subtheme	Nodes
1. Emotionally distraught	1.1. Emotional exhaustion and despair	
	1.2. Going into (and feeling) shock	<i>1.2.1. Everybody was shocked by this (9, 18)</i>
	1.3. ‘It was like a bereavement’	
2. Feeling vulnerable	2.1. Feeling judged and ‘under the spotlight’	
	2.2. Feeling vulnerable to investigative procedures	2.2.1. Feeling vulnerable to investigative procedures and answering questions
		2.2.2. Feeling vulnerable (practice under scrutiny)
		2.2.3. Heavy handed treatment
		<i>2.2.4. Intimidated by investigation Acknowledgement that the investigation is not to apportion blame</i>
	2.3. Feelings of blame, punishment and unfairness	
3. Self-blame and guilt.		
4. Trying to make sense of what happened	4.1. Rumination: Repeatedly replaying the event	
	4.2. Pulling together facts to make sense of what happened	
	4.3. Not wanting to speak or think about the event (avoidance)	
	4.4. <i>Putting the event into perspective</i>	<i>4.4.1. Counting blessings and acknowledging the positives</i> <i>4.4.2. It could have been much worse (focus on the lesser negative)</i>
5. This event ‘permeated everything’	5.1. Challenging views of safety	5.1.1. Increased awareness and fear of these events happening
		5.1.2. Losing confidence in their practice
		5.1.3. ‘You overreact to one little drama’ (defensive practice)

5.1.4. Generalising fear to other areas of life		
	5.2. Questioning their future in midwifery	
	5.3. Impact permeating personal life	5.3.1. I became less sparkly' (Noticing changes within themselves) 5.3.2. You take things home with you' (impact on home life)
	5.4. Living with the event and moving on (ignoring feelings)	5.4.1. Detaching in order to carry on 5.4.2. <i>"This doesn't impact on me. It can't impact on me. I have a job to do" (not letting themselves be affected)</i>
6. An enduring psychological impact	6.1. 'I can't forget it. I won't forget it.' (enduring memory)	6.1.1. <i>You remember it but it isn't negative</i>
	6.2. Reminded at subsequent events ("history repeating itself")	

Note: Bold= HH group only, Italic= LL group only

1.1. Emotional exhaustion and despair (HH and LL)

Midwives in both symptom groups reported experiencing a highly emotional response initially after the event.

"I think I felt utterly exhausted, I felt despairing, I felt really upset, I had so many different emotions going through my mind at the time but I just felt absolutely emotionally shattered really." [ID 15, HH]

"Oh within – once I'd left the room, left them with their baby, I got outside the room and I collapsed. My legs couldn't hold me anymore and I just sank to the ground and sobbed and thought I've killed a baby." [ID 40, LL]

1.2. Going into (and feeling) shock (HH and LL)

There was also a sense of shock and disbelief reported by midwives in both groups, where they attempted to process the event and the associated implication of it.

“Yeah, oh god the physical shock, the physical feeling I had was absolute horror, I had like ice cold, it felt like fluid running from all the way down my spine, when they actually said there's no heartbeat.” [ID 328, HH]

“It's a sense of disbelief. It's so horrific that it's too big for your head. Almost too big for your brain to grasp and of course there's the human side of you that's witnessing this awful tragedy and then there's the professional side where you have a role. You know you can't crumble.” [ID 362, LL]

1.2.1. “Everybody was shocked by this” (LL only)

However, a distinct node within this subtheme related only to midwives in the low distress group. Midwives referred to their ‘whole team’ being shocked and upset by the event. This emphasises the acknowledgement that they were not alone in their response.

“My colleague came back and was just the same – I mean she was more shocked than me because she entered the labour room and I said oh my god [colleague's name] baby's dead. And she just went – and she was the manager as well, she was our senior midwife and the manager of the unit – and she was in more shock than I was and that shocked me- her, you know, she just – she went to pieces nearly. Went and started crying and ‘oh my god’ you know. [...] The GP was really upset. I mean we were all upset.” [ID 172, LL]

1.3. It was like a personal bereavement (HH only)

In addition to feelings of shock and disbelief, midwives in the high distress group reported a sense of personal bereavement following an event that involved the death of the baby. This highlights the notion that, although midwives vicariously experienced the event, it was sometimes conceived as a personal loss for midwives within this group.

“It was like bereavement. That's what it was like, it was like as though I had lost a baby. That's how I felt.” [ID 203, HH]

“Well they, you know that person has lost a child, lost their baby, and they're in shock, you equally as the midwife are in shock, you haven't lost the baby but because of the relationship that you build up with the women that you care for you know there is this extended feelings of going through a journey with them. [...] So

you feel shocked as well at what's happened, you feel angry [laughs], you go down that grief trajectory definitely.” [ID 242, HH]

2. Feelings of vulnerability, blame and judgement

In addition to emotional responses of shock and distress, midwives also reported difficulty after the event relating appraisals over blame and culpability. Included within this theme are three subthemes, including being ‘judged’ within the workplace, feelings of vulnerability in relation to investigative procedures, and perceptions of blame, unfairness and punishment. Midwives in both groups reported the first subtheme. Midwives in both groups reported aspects of the second theme, however there were some distinctions. The third subtheme was only reported by midwives with high levels of distress.

2.1. Feeling judged and ‘under the spotlight’ (HH & LL)

Midwives in both groups perceived that the event (and their part in it) was discussed by others within their working environment. Knowledge of this discussion was unhelpful and likened to ‘gossip.’ It was particularly difficult when midwives felt it was their own practice within the event that was being discussed and judged.

“I kind of felt probably I was under a microscope for a while, not for a huge amount of time but that initial first week there would have been people looking at the notes and investigating and then we would have had to have looked at them individually and write our reports on them as well so it did feel like you know, being scrutinised by other people and then possibly other people hearing what people have talked about and they’ve been around when the notes have been there and they’ve had a look and made comments, you know so it, I just know that that happens because I’ve seen it happen and often it’s informally but the majority of time it’s formally done.” [ID 15, HH]

“Yeah and you’re having to come to work facing people that may be gossiping about you, surmising what might have gone off without knowing the full truth” [ID 428, LL]

2.2. Feeling vulnerable to investigative procedures

This subtheme consists of one shared node, where midwives reported feeling vulnerable to investigative procedures and answering questions about the event. Although this was a shared node, it was predominantly reported by midwives with low levels of distress. Two

additional nodes were reported only by midwives with high levels of distress. These included feeling under personal scrutiny during the investigation, and the perception of ‘heavy handed’ treatment. A final subtheme related to midwives in the low distress group reporting some feelings of intimidation to investigative procedures.

2.2.1. Feeling vulnerable to investigative procedures and answering questions (HH and LL)

Midwives in both groups reported feeling vulnerable due to the investigation taking place after the event, and the need for them to answer questions about what happened. Although aspects relating to this subtheme were identified in both high and low distress group, it was more prominent within the low distress group.

“I knew that once a complaint came in and they started investigating things get looked into, things get interpreted in a different way and that’s exactly what’s happened. I’ve literally spent, I’ve spent about half an hour, 40 minutes on the phone to the risk manager justifying my entire day with the woman, being grilled basically.” [ID 223, LL]

“I did feel very, very vulnerable because again -one is always ‘come and see me in my office’ [laughs], so you go to your manager- your supervisor of midwives -and they ask endless questions, and then you write a statement.” [ID 242, HH]

2.2.2. Feeling vulnerable: Practice under scrutiny (HH only)

A distinction within this subtheme related to a perception being ‘under scrutiny’ following the event, and this was only reported by midwives with high distress. Feelings of vulnerability were caused by feeling under the suspicion of poor practice, where their ‘notes were pulled’ and previous conduct discussed by senior management.

“I think the negative thoughts were very prevalent and that was my immediate fear was that I was possibly going to have to be referred to supervisor and my practice would be looked at because I know that it happens in midwifery.” [ID 15, HH]

“So what they then do is like ask other people, so what else has she done this midwife that is bad? So like, punitive against you. “[ID 203, HH]

2.2.3. Perception of ‘heavy-handed’ treatment (HH only)

Furthermore, midwives with high distress reported a perception of investigative procedures being ‘heavy handed’ in its approach. This is illustrated in the extract below, where the midwife compared the aftermath of a maternal death to being ‘accused of murder,’ due to the involvement of the police;

“After the event then the consultant notified the police. And all the managers in the hospital and all the police were notified [...] we were questioned and I know they had to do it but it was after a full night shift and they asked us if we had removed anything from the room. Had we touched anything or had we done anything to the patient without anybody being present with her.” [ID 296, HH]

2.2.4. Feeling intimidated by the investigation (LL only)

Midwives with low levels of symptoms reported feeling intimidated by investigative procedures. However, this was primarily due to the perceived seriousness of the situation and the seniority of individuals involved with the investigation. It was not, unlike midwives with high distress, perceived to be out of proportion or ‘heavy handed.’

“Because of the high level of people that were in the room. People who – you know the head consultants were there. Representative chief executive of the hospital were there. You know these people you only just hear their names you don’t actually sit around a table with them and to suddenly have to give a resume of what happened and how I was involved made me feel even more... oh what’s the word I can use for that?” [ID 108, LL]

2.2.5. Acknowledgement that the investigation is not to apportion blame (LL only)

Furthermore, midwives in the low distress group acknowledged that investigative procedures were inevitable and not necessarily to apportion blame.

*“I had to write a statement out, the police came because it was an unexplained death
So that was rather sort of disconcerting but you know that’s what they have to do”
[ID 362, LL]*

“It’s not to apportion blame it is to ascertain what happened and why it happened and how they can prevent it happening again.” [ID 108, LL]

2.3. Feelings of blame, punishment and unfairness (HH only)

Midwives with high distress reported feeling blamed for the event. Although there was slight evidence of this within midwives with low levels of symptoms ($n=3$), it was not prominent enough to be retained as a subtheme within the group.

“Well after the event one of the anaesthetists went and spoke to the patient’s family and told them that she had a reaction to a drug that was given – an antibiotic. And I gave the antibiotic. Although it was checked by several other people. And he never said to me what he was going to say to them until we were in the room. And I went with him and I could have [laugh] collapsed against the wall thinking ‘Heavens I’ve killed her.’” [ID 296, HH]

For some midwives, being blamed exceeded the difficulty of having encountered the event in the first place;

“I think I can cope actually with the actual going through that again, it's the fact that people making me feel like I've done something wrong.” [ID 328 HH]

There was also a sense of unfair treatment following events. Midwives felt that aspersions of blame were incorrect, and that the implementation of disciplinary procedures was akin to ‘punishment’;

“I was absolutely devastated. Absolutely, I broke down, I was sobbing and I just thought I’d done nothing to hurt this person, this mum, nothing at all. I went to the funeral because she wanted me to go to the funeral and all they’ve done is... I feel like I’m being punished.” [ID 328, HH]

Midwives also perceived unfair treatment when they witnessed other professionals acting deceitfully and covering up their own malpractice rather than answering questions honestly;

“She told a lie. She lied, she lied when she was interviewed and it was there in black and white. Now the fact that I saw that just, it finished me, I saw, a red mist came down and I was ready to walk out and never to return to midwifery ever again.” [ID 328, HH]

3. Self-blame and guilt

A tendency for self-blame and guilt was reported by midwives with both high and low symptoms. There were feelings of 'letting the mother down' when a birthing episode ended with an unfortunate outcome.

"I felt that I'd let them down, you know even though it was beyond my control and there was nothing that I could have done about it and I hadn't seen her for 6 days anyway and all the rest of it, you know, I knew that, but it was my job to present them with a healthy baby, that's what midwives do, they look after mothers don't they and at the end that is the end result and everybody's happy, so you know when that comes you know, because we'd had this lovely, lovely relationship between us and you know it was just so, well it was just awful." [ID 362, LL]

This was coupled with a tendency for midwives to automatically question their own practice after the event, especially when the cause was ambiguous.

"I put added stress on myself by beating myself up about the fact that could I have done something about it? That was the overwhelming feeling of what could I have done differently." [ID 129, HH]

4. Trying to make sense of what happened

This subtheme includes midwives descriptions of attempting to process the event. It includes four subthemes. The first two subthemes, 'rumination and repeatedly replaying the event' and 'pulling together the facts of the event' were reported by midwives in both groups. A third subtheme, 'not wanting to speak or think about the event' was only reported by midwives with high levels of distress. The fourth subtheme was only reported by midwives with low levels of distress, and involved 'putting the event into perspective.'

4.1. Rumination: Repeatedly replaying the event (HH and LL)

Midwives reported going over and over the event in their head in order to identify how it happened. This process of rumination was sometimes voluntary, with midwives purposefully thinking through the event repeatedly in order to identify possible warning signs that were overlooked;

"What just happened, trying to get your thoughts together, all the different things that run through your mind about what could have happened and why did it happen

and did I do anything that could have, you know that could have caused it, just a million and one things running through your brain.” [ID 15, HH]

“You’d start going over things and wondering if you should have done something different, if somebody else could have done something different. Even though you probably know in your heart of hearts having spoken to everybody that you couldn’t have and think you still re-run for days afterwards.” [ID 25, LL]

However some midwives reported an involuntary cycle of rumination, where they were unable to stop thinking about the event.

“It just literally comes into my head and I just want it to go away. I just want it to leave me alone now. At first when I thought about it, it would set my heart racing and I’d feel sick and go hot and get panicky and now it doesn’t have that effect on me at all but it just flashes into my head.” [ID 251, HH]

“Oh it – I was very upset actually. Just couldn’t get her out of my mind. It was constantly on my mind and then you know the day that I was told that she’d died was very sad, very sad. “[ID 108, LL]

In cases such as these, some midwives reported difficulty sleeping;

“I’m getting nightmares and dreaming about everything and people, what I think about all the time.” [ID 328, HH]

“... like a little video running, every time you try to go to sleep, you have a little video of you replaying certain things that happen” [ID 15, HH]

“And sometimes there was little aspects of it, even as I know there was nothing I can do, little, not guilty but there was bits of me you know 2 o’clock in the morning, cause it did – you know I had a few sleepless nights over it, wake up and play it all back and think oh god if I’d gone in that room at quarter to 2 would the baby be taking its last breath, could I have resuscitated it?” [ID 172, LL]

“Not sleeping properly, worrying whether you’d, there was something you could have done to make it better.” [ID 428, LL]

Also included within this subtheme were experiences of flashbacks reported by midwives with high levels of distress. Whilst this was an aspect of the criteria for recruitment into the study, it demonstrates the severity of impact that the experience had.

"I had terrible flashbacks after it, and I had had the baby in a sort of paper towel thing that they have, and I went for a meal and I fish in greaseproof paper sort of thing, and after that then I started having the nightmares at night all the time because it had obviously triggered it off in me." So I had gone out for this meal and what happened was I went to bed and I dreamt that I could see the baby in the paper, and afterwards- that trauma is like I can see this- and that's really distressing for me. And that kept coming back all the time and I was just quite shaken." [ID 203, HH]

"All the blood, these huge haemorrhages you get loads of blood." [ID 15, HH]
"...in the first few weeks and months I would have gone to bed and occasionally even shut my eyes and seen it. It was really quite horrible." [ID 320, LL]

4.2. Pulling together facts to make sense of what happened (HH and LL)

Midwives reported needing to 'pull together the facts' of the event in order to understand how and why it happened. Examples of behaviour within this subtheme included going to see the mother on the next shift, calling the ward afterwards to find out how the mother or baby was, and trying to obtain diagnostic information about the cause of the event.

"I wanted to go into theatre to see what exactly was going on and you know the cause of it and exactly what they would do. I didn't do anything as such in theatre I mean I just had to watch as they removed her uterus and tied stitches round it and things to save her." [ID272, LL]

"...you know when you've pieced the jigsaw together, the reason was the baby was born with haemolytic strep which is an infection. Now that was the cause you know- if you start to unpick." [ID 242, HH]

4.3. Not wanting to speak or think about the event (avoidance) (HH only)

Midwives experiencing high levels of distress also reported implementing avoidant behavioural strategies into their working life in order to prevent their coming into contact

with people or places associated with the event. This is illustrated in the extract below, where a midwife describes being at a meeting when another colleague began to discuss the event she had experienced:

“And I didn’t know what she was actually going to say. I didn’t get as far as knowing what her point was about it. But I just had to get up and say I’m sorry but I was involved in that case and I can’t listen to you talk about it. [...] I was too scared to sit there because I didn’t know what emotions it would bring up to me and sitting in amongst all these other people and with her being there talking about it.[...]When I left the room. I cried afterwards. Just cause of the shock of it coming up and the feeling of oh my god it could come up any time and hit me like that and... It was the way it made me felt that scared me if you see what I mean? I just thought I can’t deal with it.” [ID 251, HH]

Avoidant behaviour is one of the symptom clusters within posttraumatic stress, and therefore this finding within the analysis is likely to be a product of the criterion used. However it demonstrates how midwives encounter difficulty within their working environment for a period of time after their encounter with trauma.

4.4.Putting the event into perspective (LL only)

The nature of the events themselves were not necessarily less adverse than those reported by midwives with high distress, but there was a distinction in the level of contextualisation reported by midwives in each group. Only midwives within the low distress group demonstrated an attempt to view the event in its greater context. This included ‘counting blessings and focusing on the positives,’ and perceiving that ‘it could have been worse.’

4.4.1.Counting blessings and acknowledging the positives (LL only)

There was evidence of midwives focusing on the positive aspects of the situation. This included focusing on the abilities demonstrated by colleagues to work as a team, that protocol was implemented successfully. This is demonstrated in the extract below where the midwife, after witnessing a stillbirth of one twin, focused on the positive outcome of having delivered the other twin without further problems:

“I also felt a sense of relief that the experience was over, that obviously the lady had delivered the other baby and the baby was fit and well and that I could basically

slow down a little bit now instead of working on that fast pace that we were doing that night.” [ID 335, LL]

4.4.2. It could have been much worse (focus on the lesser negative)

There was also a process of downward comparison, where midwives adopted a perspective of ‘it could have been worse,’ considering the potential for a more adverse outcome.

“I just sometimes think gosh well what if she’d been in Waitrose and gone to the loo just think how awful that would have been. I’ve reconciled myself with the fact that this could have been so much worse. This could have happened to this woman in a public place and she could have bled to death as well. So there’s been reconciliation perhaps that actually it was alright in the end and although this was absolutely tragic the situa... you know it is ok now. Perhaps not for her, I don’t know but it is ok for us.” [ID 294, LL]

This perspective also encompassed acknowledgement that other midwives ‘have it worse’ than they do. Again, this process of downward comparison enabled midwives to acknowledge the fortunate aspects of their experience, rather than solely focusing on the negative.

“I did feel a little bit out of my depth really because I was newly qualified and I was in this situation but that, I mean that’s the way it happens you know, I mean other midwives have probably dealt with worse things than that and they’re newly qualified but I mean I know some colleagues, you know previous colleagues that I’ve actually worked with they’ve actually left the profession after an event maybe such as this because they’ve not been able to deal with it and cope with it and even I’ve met students who’ve had a very traumatic delivery situation and they’ve actually left the course and gone to do something else.” [ID 387, LL]

5. The impact permeated everything

This theme related to the nature of perceived impact reported by midwives. The experience of a traumatic perinatal event permeated beyond the specific event, and impacted upon perceptions at subsequent deliveries, personal and home lives. There were four subthemes within this theme. The first two subthemes, ‘challenging views of safety’ and ‘questioning a future in midwifery’ were reported by both groups. A third subtheme was only reported by midwives with high distress, and includes a perception of the event ‘impacting upon

personal life.’ A final theme related to midwives’ attempts to ‘move on’ from the event and prevent the impact from permeating too far. Aspects of this subtheme were reported by both groups, and involved ‘detaching’ from subsequent experiences in order to cope, reported by both groups, and ‘not allowing’ events to impact upon them, which was only reported by midwives with low distress.

5.1. Challenging views of safety (HH and LL)

This subtheme related to midwives’ perceptions of encountering subsequent traumatic perinatal events, and included a sense of ‘increased awareness,’ ‘losing confidence in practice,’ developing a ‘defensive’ style of practice. The high distress group reported an additional dimension, where fear for safety extended into their personal life.

5.1.1. Increased awareness and fear of subsequent traumatic perinatal events (HH and LL)

One impact reported by both groups was that previously held beliefs about safety within the workplace were challenged, and midwives expressed feelings of fear about encountering another event whilst providing care for women.

“Thinking every time I went on duty I thought oh my god you know anything can happen. Look what’s just happened. That’s never happened to me before.” [ID 172, LL]

“I enjoy my job as much as before with relationships with women and that but I just find the actual delivery side more stressful. Just not – I’m always even – I’ve always been one for being aware. Any midwife would be aware things might go wrong and you’re always looking, as part of your job, for clues that everything’s alright. But it’s just made me more dwell on the almost more likely – in my head there’s a high chance it could go wrong rather than think, ‘chances are it’ll all be fine’.” [ID 251, HH]

5.1.2. Losing confidence in practice (HH and LL)

A consequence of increased fear and awareness was a loss of confidence in practice. This lack of confidence related to perceptions of abilities to encounter adverse events, and also an increased wariness of being able to receive necessary support when required:

“It took me a long time to recover from that and feel confident looking after- well I did it- look after somebody at home because [pause] there isn’t always a backup.” [ID 10, HH]

“I just lacked confidence in everything then. My confidence just went right down again. So I – you know you just think sometimes you think oh god maybe I shouldn’t have come up to delivery suite. Maybe it’s not for me.” [ID 108, LL]

However, not all midwives experienced a loss of confidence. A small number of midwives in the low symptom group reported an *increased* sense of confidence in their ability to encounter similar adverse events within their profession.

“I think it sort of made me realise that I actually can do this job. You know because you can sometimes when you start off in a new career you can think am I up to the job, can I do it and here I am 8 years on and I’m still doing it. Do you know what I mean, it made me realise that I can do it, I can deal with it.” [ID 387, LL]

As illustrated in the above extract, midwives with low levels of distress found that their experience reaffirmed their ability to confidently encounter difficult events occurring within the perinatal period.

5.1.3. “You overreact to one little drama” (defensive practice) (HH and LL)

Fear of subsequent events occurring was reported alongside increased vigilance in practice, reacting sooner to smaller warning signs and adopting a more defensive style of practice in order to detect or prevent adverse situations.

“Just if anybody had a tweak or a pain or a twinge I was nearly on overkill then. You know just - when maybe there was no reason to worry, I was worrying because I didn’t want things to go wrong again, you know- just being over anxious.” [ID 358, HH]

“And I became a very – which I had never been – a very kind of risk averse midwife. You know I wouldn’t take risks. Everybody was monitored even if they didn’t need to be. You know I constantly had to talk to myself to justify what I was doing but I have to say after about a year – I mean over the year it got less and less.” [ID 40 LL]

5.1.4. Generalising fear to other areas of their life (HH only)

In addition to the event impacting upon work-related situations, the high symptom group also reported that fears over safety extended beyond their professional life. These midwives developed a high level of concern for other people in their life. For example, one midwife described an increased concern for her daughter's safety when driving:

"No it sort of just set off this anxiety in me. I think it was almost like vulnerability of life or something. [...] I became for that week or two just anxious about everybody else in my – anyone who meant anything to me I'd be really anxious about them even for silly things [...] Like one of my daughters – just her driving. She'd been driving for several years. She drives around all the time. And suddenly I was worried – she's out driving, she might have an accident. Nothing at all relating to the actual thing. Just other than it really raised my anxiety levels." [ID 251]

Another midwife also reported increased concerns for when they, or indeed their friends and family, have children of their own

"I think it's made me a little bit nervous for when I have children" [ID 433, HH]

5.2. Questioning their future in midwifery (HH and LL)

A prominent impact of traumatic perinatal event exposure in both symptom groups was an altered perception of their future in midwifery. An immediate impact of traumatic perinatal event exposure was to not want to go back to work.

"I think if I hadn't have gone back then I maybe would never have gone back." [ID 129, HH]

"I had said I didn't want to go back and I very rarely feel like that, I didn't want to go back and they did make sure there was somebody else on there just in case. But no I was ok." [ID 25, LL]

In addition to this, some midwives considered or actually changed their area of work as a result.

“It actually lead me to look for other work outside of the acute side of midwifery and I actually got a job to go and work out in the Community because I couldn’t, I really couldn’t face having to work in the same environment where that potential situation could have happened again.” [ID 15, HH]

Another impact within this related to midwives considering leaving the profession altogether, and this was reported by both groups.

“It makes you feel like you don’t want to be a midwife anymore.” [ID 433, HH]

“I mean I’ve in this last 6 months – yeah my kind of whole attitude of midwifery is changing and it’s – I’ve had several incidents. That’s probably one of the worst this year but just several where you just think enough is enough really you know. Sooner or later this is going to end up with me losing my job.” [ID 223, LL]

5.3. Impact permeating personal life (HH only)

This subtheme was only reported by midwives in the high distress group, and includes reported of the event’s impact permeating beyond their work life, and affecting their personal life.

5.3.1. “I became less sparkly” (Noticing changes within themselves)

Some midwives noticed changes in the way they felt or their general demeanour following experiencing the traumatic event. This ranged in severity, from midwives feeling low in their mood and withdrawn, to others reported serious implications for their mental health.

“I mean, I lost my sparkle.” [...] “I was very sparkly before that. I have got an ability to speak out and whatever, and I like to be heard [laughs]. So I was silenced basically!” [ID 203, HH]

“Personal changes, other than depression and helplessness all the time, being constantly sick, they tend to kind of, they do multiply your stress constantly.” [ID 57, HH]

5.3.2. “You take things home with you” (impact on home life)

The impact of the event extended further into midwives’ personal relationships. Midwives described adverse impacts upon their personal relationships, with some believing that the

event contributed to their divorce from a partner. Others described negative implications for their family life. This highlights the extent of permeating impact experienced by midwives with high levels of distress.

“It impacted on my family life. My children. The day after I was – I had a 4 year old – she was 4 years old at the time my daughter – I was going on a school trip. So I attended the school trip. I looked dreadful. All the mums in the playground were saying what on earth has happened? I hadn’t slept. I hadn’t eaten. So I looked – I’d been crying. I couldn’t see out of my eyes.” [ID 129, HH]

“Personally it has really affected me because, well it ruined my relationship with my ex-husband, my divorce, my children- they have all suffered because of it.” [ID 203, HH]

Furthermore, some midwives reported being unable to ‘get away’ from the event, when they lived in close proximity to the mother. This meant that there was always a perceived (or actual) potential to see the mother again, which was an upsetting prospect.

“I can still get quite emotional about it and it makes it quite worse because I live in a small area and these people – the family I knew and I still see them and I still see the bairn you know it’s strange yeah.” [ID 296, HH]

5.4. Not allowing the event to impact upon them: Moving on

This subtheme included reports of attempts made by midwives to control the impact of the event, in order to limit the extent to which they felt affected in subsequent day-to-day life. Different strategies were applied by either group.

5.4.1. Detaching in order to cope (HH and LL)

There was a process of detachment used by midwives in both groups. However, the strategy to which this was implemented differed. Midwives in the low distress group reported actively detaching from events that had the propensity to cause distress.

“You have to switch off from one thing to another because you just couldn’t do the job otherwise.” [ID 25, LL]

However midwives in the high distress group tried to ignore their feelings. This indicated that these midwives were still feeling distressed, but that they made an effort to not acknowledge this. This differed slightly from the ‘letting go’ of feelings indicated from the previous groups’ use of detachment.

“It was just sort of classic depression really but I just kept a lid on it and just kept going and kept going.” [ID 74, HH]

“I keep taking the happy pills and we carry on.” [ID 10, HH]

5.4.2. “This doesn’t impact on me. It can’t impact on me.” (LL only)

Furthermore, midwives with low levels of symptoms reported developing a sense of resilience to adverse situations. Many focused on the job that they had to do, and the belief that they cannot do their job if they are still reeling from a previous event.

“I’m not somebody who has sort of hysterical outbursts to situations and I’ve never ever been somebody who’d go off sick because of a trauma at work. That’s my job, that’s my choice and I just get on with it really.” [ID 391, LL]

6. An enduring psychological impact

Aspects included within this subtheme related to midwives’ perception over the enduring nature of memory for their experience. There were two subthemes. Midwives in both groups reported this first subtheme, ‘an enduring memory of the event’. The second subtheme, ‘remembering without negative affect’ was only reported by midwives with low distress.

6.1. An enduring memory of the event (HH and LL)

The nature of the memory for the event was described by midwives as vivid, powerful and enduring. Midwives often described highly visual and detailed scenes.

“I can’t forget it. I can’t forget it. I can still see the lady’s face. I can’t forget that. I’m not going to forget it.” [ID 316, HH]

“I’ve never, ever forgotten - I mean it was quite a long time ago – I’ve never forgotten seeing that, that pain and that event and those huge clots, they were massive dinner plate clots [...] Yeah the bed and the big clots and the blood running

off the side and that woman in that amount of discomfort. That scene is very – yeah it's still really vivid that picture.” [ID 415, HH]

“I don't think I'll ever forget it as long as I live and nor will the consultant.” [ID 320, LL]

Memories of the event often elicited negative feelings, indicative of the powerful nature of the memory.

“But - I still have this at the back of my mind you know that this particular woman – you know? And I can still feel myself kind of shaky speaking about it you know. I get quite emotional still.” [ID 296, HH]

“But still you just remember everything very clearly from at that time. Horrible.” [ID 108, LL]

6.1.1.Remembering without negative affect (LL only)

However, there was a distinction reported between the high and low symptom group. Some midwives with low distress were able to recall the event without negative affect. This indicates a qualitative distinction in the nature of the memory recalled by midwives in high and low distress groups. Being able to recall a traumatic event without negative affect suggests that these midwives had processed their experience to a greater extent.

“... I do often you know, little times I'm doing a clinic in there I do still think about it. Especially when the sun shines through - 'cause the sun was shining through the window. So odd little times I might think about it. [...] I wouldn't say it was negative. It's just a thought rather than like a – it's not a horrible feeling if you know what I mean it's just a thought. You know how thoughts come in [...] so yes I wouldn't say it was negative, no.” [ID 172, LL]

“It's not something that haunts me or anything” [ID 391, LL]

6.2.Reminded at subsequent deliveries (“history repeating itself”)(HH only)

Midwives with high levels of symptoms also reported being reminded of the event at subsequent deliveries where similar contextual situations arose. Midwives described

experiencing flashbacks or reliving memories of the previous event, and described a concern that a similar occurrence was about to happen.

“But one night then after that I was working the consultant that was on asked for a particular antibiotic to give to another patient and went outside and I couldn’t come back in. I just couldn’t go back into the room. I had to get somebody else to go.”[....] “I just felt it was history repeating itself. It was just – I was getting flashbacks to the delivery. Yeah, and to this patient dying. And just that probably that I hadn’t dealt with it in my mind properly. And the asked for antibiotic was a similar case – whenever he asked for this particular antibiotic it just took all the flashback back to me and I just couldn’t go back in.” [ID 296, HH]

Summary

Responses to traumatic perinatal events involved feelings of shock and emotional upset. There were also feelings of guilt and self-blame for not preventing the event from happening. Due to the ambiguous nature of the events, midwives attempted to process details of the event, and reported a period of rumination and ‘fact collecting’ in order to ascertain how it happened. Midwives felt vulnerable to the investigative procedures that were taking place, however the extent of this vulnerability differed in focus between groups.

The impact of the event over time was different for the high and low symptom groups. Both groups became aware and fearful of subsequent events happening in their working lives. The high distress group also became fearful of adverse events occurring outside of work. Both groups considered leaving or changing their role in midwifery as a result of their experience, and some had already changed their location of practice. The memory for the event was enduring, however this was not always a negative impact for the low symptom group, who were able to recall the event without negative feeling. Midwives reported attempts to move on from the event and to stop it from having a continuous negative impact, by detaching from or ignoring their feelings. Midwives with low levels of distress reported a perspective of ‘not allowing’ their event to impact upon them.

Midwives experienced feelings of vulnerability to investigative procedures and felt judged or ‘gossiped’ about within their working environment. There was a distinction between symptom groups, where midwives with high levels of symptoms felt personally blamed and unfairly treated by other people following the event. There were feelings of vulnerability in

midwives with low levels of distress, however there was also recognition that investigation procedures were not akin to blame.

There was an association between the degree of distress following traumatic perinatal event experience, and the extent to which the perceived impact permeated different aspects of their life. Midwives became more aware about traumatic perinatal events occurring were concerned about experiencing another event in the future. The impact of the event often extended into perceptions of remaining in the profession. For some midwives in the high distress group, this impact extended beyond the work domain and impacted upon their home and family life.

Therefore there were a number of similarities in the initial response and impact of traumatic perinatal event exposure between midwives with high and low symptoms. However there was also a tendency for midwives with high symptoms to personalise the experience and response to the traumatic perinatal event, and to report a more extensive impact of their experience. Those with low levels of symptoms recognised they were not alone in their response, and obtained a greater perspective over their experience and the investigative procedures that ensued. The greater emphasis on vulnerability between either group highlights a difference in the appraisal of difficulty. Midwives with low distress reported event-specific causes for their feelings of vulnerability, whereas midwives with high levels of distress held a generalised perspective, where their practice beyond this particular event was in question at the same time.

3.3 Section three: Helpful and supportive strategies

This section includes references to helpful or unhelpful aspects for midwives after the event, and their perspective about the nature of support received. There are six themes within this section. Three relate to helpful strategies or aspects experienced after the event and the remaining three related to midwives' perspectives of seeking or receiving support. Elements of each theme were identified in both groups, however there were some distinctions at the subtheme level. Details of themes and subthemes are provided in table 5.6.

Table 5.6 Final template for category 3: Helpful and Supportive aspects

Themes	Subthemes	Nodes
1. Taking steps to prevent a similar occurrence from happening again	1.1. Organisational changes (to procedure or protocol)	
	1.2. Personal changes to practice	1.2.1. Becoming more assertive

		1.2.2. Making sure that they support others in the future
		1.2.3. 'Turn it around' use the event as a learning opportunity
2. Wanting to feel absolved of blame	2.1. Wanting to know the parent's perspective	
	2.2. Gaining information regarding the cause of the event	
	2.3. Being reassured (by colleagues)	
	<i>2.4. Gaining an objective perspective by talking through the event</i>	
3. Implementing personal coping strategies		
4. Perceived absence or inappropriateness of support (higher up)	4.1. "There just isn't any support there"	4.1.1. 'There just isn't any support there'
		4.1.2. Punitive response from senior colleagues
	4.2. Difficulty accessing any support	4.2.1. Having to seek out support (it not being offered to them)
		<i>4.2.2. Unable to access support even when it was there</i>
	4.3. Not feeling acknowledged or understood by senior colleagues	
5. Perception of being supported by those around them	5.1. Feeling acknowledged by peers and colleagues	
	5.2. Supported by their colleagues and supervisors (able to talk and debrief)	
6. Wanting/needing to talk about it	6.1. Helpful to 'get it off your chest'	6.1.1. Need to be mindful of who you speak to
	6.2. Spoke to colleagues	6.2.1. Value speaking to colleagues with similar experiences
	6.3. Spoke to partner	
	6.4. Having to seek own (professional) help	<i>6.4.1. Knew that professional input was there if needed (but they didn't need it)</i>

Note: **Bold= HH group only**, *Italic= LL group only*

1. Taking steps to prevent a similar occurrence from happening again

The first subtheme related to the perceived helpfulness of making changes to practice and learning lessons from the traumatic experience. Both groups reported a need to know that the event had contributed to a 'greater good' of informing practice, and that attempts were made to prevent a similar event occurring in the future. There were two subthemes within this theme; relating to 'organisational' and 'personal' changes.'

1.1. Organisational changes (to procedure or protocol) (HH and LL)

There were reports of the event eliciting changes within the organisation to prevent similar difficulties occurring again. Examples of changes included conducting instrumental deliveries in theatre in case an emergency caesarean was required, and implementing revised guidelines for the minimum number of available staff on ward.

"I think certain things have changed as a result of what happened that particular night in terms of I think management and in terms of – I think there was a big meeting about it actually, about the whole incident. I think there were some sort of guidelines that were changed over it or – in terms of vaginal breech deliveries and things like that I think – especially 32 weekers." [ID 316, HH]

"And as I say we are quite a new unit and there have been times where there haven't been many members of staff and now that's been sorted, as is the case with the obstetricians not being sent up – that was spoken about and new ruling has been put in place so that wouldn't happen again. There was quite a lot of lessons learnt from that one incident." [ID 445, LL]

These changes removed the contextual difficulties that had limited midwives' abilities during the event. Therefore they were, for many, a source of comfort.

"So you know on reflection you think something good did come out of it" [ID 108, LL]

In addition to this, changes were often interpreted as an indication that individuals in the wider organisation had recognised the event as important.

"Oh yeah it was taken all very seriously and they've put, they've got a different platform now[...]" [ID 294, LL]

1.2. Personal changes to practice (HH and LL)

In addition to organisational changes, midwives in both groups described implementing changes in their personal practice following the traumatic event.

1.2.1. Becoming more assertive

Midwives became more assertive in the way they practice, and described being less likely to wait for confirmation of their concerns and more likely to push for others to listen to them.

“Nowadays if I have a concern I don’t bother with the chain. I just know that if I have real concerns and I’m not getting anywhere I go higher till I get to the highest.” [ID 358, HH]

Midwives with high distress generally increased their assertiveness in practice in response to their feelings of ‘not being heard’ in the previous event. However, midwives with low distress increased their assertiveness despite not feeling this way. For these midwives, becoming more assertive indicated an increased level of confidence gained from experiencing the traumatic event.

“So I have become more assertive as a midwife because of it. Even more than before and I won’t take any nonsense” [ID 108, LL]

1.2.2. Making sure they support other midwives at future events

An additional personal change reported by midwives in both groups included an increased awareness of the need to support other midwives who encounter adverse events

“Even at work, if I don’t feel anything or I feel emotional about anything or anybody does I wouldn’t hesitate in saying to somebody are you ok? To a member of staff or a patient or anything. Are you ok? Are you managing ok? But it just makes you more aware of what can happen I think.” [ID 296, HH]

“I suppose I am very – I kind of hunt down midwives who I hear have had a traumatic delivery and say you know if you ever want to talk it through, truly I’ve been there, I know what it’s like, you can always bend my ear.” [ID 40, LL]

Therefore, as illustrated in the above comments, midwives were not only more likely to take steps to protect themselves, but there was also an increased awareness in the need to support other midwives who may encounter similar experiences.

1.2.3. 'Turn it around' use the event as a learning opportunity

The need to learn from the event was a strong theme in both high and low symptom groups. Learning from the event was a way of giving the event meaning, but also a way of ensuring that a similar event did not happen in the future.

"I've used it as a learning tool, I've kind of tried to turn it the other way round and think what can I use from this, and I've used it to develop my confidence back again, I've used it to cope with similar scenarios, how I deal with those kind of stressful scenarios so I've tried to turn it upside down and bring positive things out of it, but that's taken quite a while but each time I'm faced with something like that I feel, although it is still stressful I feel I can cope with it better." [ID 15, HH]

"In terms of my profession it was a huge learning curve, definitely. You don't learn everything at all in midwifery- I don't think you ever do and for me it was huge learning curve and one to put away and say right it's a situation I've had and I know how I would react the next time." [ID 272, LL]

Others valued the incident for providing an experience to learn directly about an aspect of midwifery, which would have been otherwise unattainable

"I've not just read it in books that these things can happen, I've actually seen these things." [ID 387, LL]

2. Wanting to feel absolved of blame

Midwives described a wish, or a need, to feel absolved of blame following the event. There were several ways in which this was pursued. The first was from parents, where midwives described wanting to speak with parents after the event. The second was from learning the objective cause of the event, by obtaining information from the investigation. The third was through talking about the event with colleagues. Both groups reported the first two subthemes. There was a distinction in the third subtheme for either group. Midwives in the high distress group talked with colleagues and received reassurance that the event was not their fault. Midwives in the low distress group however reported talking through the event from start to finish in order to obtain an objective perspective.

2.1. Wanting to know the parent's perspective (HH and LL)

Midwives reported wanting to go and see the parents, to attend funerals when it was appropriate, and to spend time discussing the birth with parents. This helped midwives to know that parents did not hold them responsible for what happened.

“She could see the panic in my face and she knew-and she said to me afterwards when she came in to have another baby, she said I could see you were trying to do everything you know and it wasn’t working. So that tells me that she didn’t blame me.” [ID 358, HH]

“I kept in contact with her and I went to the baby’s funeral. She had no sort of animosity towards any of the staff she was only grateful for what we tried to do and you know there was never any like blame. She never blamed us for anything.” [ID 172, LL]

2.2. Gaining information regarding the cause of the event (HH & LL)

Knowing the clinical cause of the event helped midwives by absolving perceptions of personal blame.

“As it turned out this baby had a really bad infection which I would have never diagnosed as a midwife.” [ID 242, HH]

“The baby was later found to have some structural abnormalities.” [ID 391, LL]

2.3. Being reassured (by colleagues) (HH only)

Talking with colleagues was also reported as a helpful way of reducing personal feelings of culpability. Those with high levels of distress found that receiving reassurance from those around them was helpful in accepting that the event was not their fault;

“I just needed somebody telling me that it wasn’t all my fault.” [ID 358, HH]

“I did get quite a lot of support from other colleagues who very kindly you know reassured me that it wasn’t anything that I had done.” [ID 15, HH]

“I just reflected on it really. Just thought- well we followed the drills - I discussed it with members of my team.” [ID 10, HH]

Although, this wasn't always helpful;

"I mean I tried to reassure myself and then – I had friends around me and they tried to reassure me but they would say the right things but then I think there comes a point when how do you reassure somebody who can't be reassured and I felt at that time... [crying] sorry just give me a minute." [ID 342, HH]

2.4. Gaining an objective perspective by talking through the event (LL only)

Midwives with low distress reported talking through the event with their colleagues. This was perceived to be helpful as it provided a method of obtaining an objective perspective of the event.

"I think just talking. Talking about my feelings and for me you know close friends, the lady that it was involved we'd go out and have a coffee and chat about it and you know just talk through so that I know I was keeping everything in perspective" [ID 172, LL]

"I think it's incredibly helpful to talk things through and I think even explaining this to you so thoroughly actually confirms with me that yes you know its ok now" [ID 320, LL]

3. Implementing personal coping strategies (HH and LL)

There were also attempts to counteract any negative impact of the events through personal coping strategies, implemented outside of work. Whilst these varied within groups, three key strategies were through using alcohol to distress at the end of the day:

"I maybe have more than the recommended intake of alcohol possibly. I'm not an alcoholic but [laugh] I probably would use alcohol as a form of getting off to sleep at night. As in one glass of wine rather than a bottle of vodka or anything – you don't have to worry about my... [laughs]" [ID 129, HH]

"Jack Daniels [laugh]. Yes probably a couple of glasses of wine when you get home from work – de-stresses. Yes absolutely." [ID 335, HH]

There were also attempts to make time for themselves at home, to relax and unwind:

“I think ahead, try and organise it, and when I get home I switch the phone off, do other things- go for a swim or something, walk the dog- ride the horse, bake a cake.” [ID 10, HH]

“Yeah I just, I just need that hour and you know just once a week just knowing that I could just clear my mind, clear my thoughts, switch my phone off. My kids were in school safe and that was just an hour for me.” [ID 172 LL]

Some midwives attempted to increase their understanding of physiological aspects of midwifery, or to learn psychological coping methods:

“I actively kind of researched and read up about physiological third stages. I got – not obsessed about it but I was really – I read everything and you know talked to people about it, what they thought about it, why did they cut the cord then, why did they give the injection? You know really, really needing to be completely clear in my head how it works to know - And I’m still a bit like that.” [ID 415, HH]

“I don’t know because when I worked in the sort of pregnancy loss and stillbirth unit you know I did a counselling course and it kind of made you able to cope with things a wee bit better but sort of made you sort of be a bit more objective probably and understand you know how things are really affecting you.” [ID 458, LL]

Therefore, aside from strategies implemented in the workplace, midwives found that implementing personal strategies were helpful in managing the impact of the event.

4. Perceived absence or inappropriateness of support

4.1.1. “There just wasn’t any support there” (HH and LL)

Midwives in both groups reported a perception that there was no support available for them from senior colleagues or management after the event. For some, this was a general recognition that support was lacking. Others perceived that they were not supported after the event.

“There, very rarely, is anybody there to help you.” [ID 242, HH]

“It’s often you know on a tick list that the parents have been debriefed. It’s never on the tick list that the staff have debriefed.” [ID 207, LL]

4.1.2.Punitive response (HH and LL)

Midwives’ felt that the focus of any contact with senior colleagues was to determine the extent of wrongdoing, rather than to ascertain the extent of impact upon them. This was identified in both groups of midwives.

“When I actually saw her that she wasn’t in the least bit interested in making feel better about it or anything else. She just wanted to analyse her notes to see where we could get sued or not if necessary. That’s what it felt like. I didn’t feel at all that she was doing it any way to support me. She was purely doing it to check the notes and go through what happened so that if there was a case later on she’s got it straight. That’s how she left me feeling.” [ID 251, HH]

“I- actually I think- me and my colleagues always feel like it’s a bit of a witch hunt. You know they always come at it, the managers because they’re terrified of the £10m claim that’s coming in, that actually sometimes they masquerade support as trying to get information out of you and particularly if you’re distressed and I think that’s awful.” [ID 40, LL]

However, as demonstrated in the above extract (ID 40), midwives with low levels of distress held a more detached perspective about the nature of support from senior management. Comments were less event-specific, and represented recognition of the organisational culture rather than a description of their specific personal experience.

4.2.Issues accessing support

4.2.1.Unable to access support (HH only)

For other midwives, there were issues in accessing support. The reason for this was often related to the busy nature of their working environment;

“Yeah, I don’t get any support really. There’s nobody really I can go to. They say you can go to your supervisor. But my supervisor isn’t always available. And she can be busy.” [ID 10, HH]

“There wasn’t the opportunity to actually have a proper sit down and speak to anybody about it because it was too busy really.” [ID 15, HH]

4.2.2. Perceived unsuitability of support (LL only)

For some midwives with low distress there was recognition that a source of support from a senior colleague was present, but that they felt it to be inappropriate.

“I have to say the supervisor of midwives that I had at the time I didn’t gel with her, she wasn’t somebody that I could have you know gone to with this really.” [ID 283 LL]

4.3. Not feeling acknowledged or understood by senior colleagues (HH only)

Midwives with high distress also felt that senior colleagues or management did not acknowledge or understand the impact of the event on them, which contributed to perceptions of being unsupported.

“We all had them, we kept having the flashbacks, we were really not good, and the management just said ‘oh well it was in the standard within thirty minutes.’ That was their response you know?” [ID 203, HH]

“But I think it’s - for people in the risk team it goes away quite quickly but for the person that’s involved in it hangs around” [ID 129, HH]

Whilst this was mainly reported by midwives in the high distress group, there was evidence of this within the low distress group too:

“My manager said ‘well, you’re not the mother’ – she’s not very supportive anyway” [ID 203, LL]

5. Perception of being supported by those around them

In contrast to the earlier subtheme (“there was no support there”) midwives reported being able to access a degree of personal support from their colleagues, and sometimes from their supervisors. Although elements of this was reported by both groups, the ability to access support and benefit from it was more prominent in those with low levels of symptoms.

5.1. Feeling acknowledged by peers and colleagues (HH and LL)

Midwives in both valued the supportive nature of their colleagues, and reported feeling sympathised with and supported when others asked how they were feeling.

“People used to say to me are you alright and they meant that in a caring way, I know that, they did” [ID 242, HH]

“Lots of other colleagues were phoning me at home from other hospitals. You know word got round very quickly cause it does in a small community and plus because we were quite a close knit unit you know other midwives were phoning up to make sure I was ok.” [ID 172, LL]

5.1.1. Feeling supported by supervisors (able to talk and debrief)(HH and LL)

Despite some feeling unsupported by senior colleagues, supervisors and management (as described in subtheme 4), not all midwives perceived senior colleagues to be unsupportive. Some benefitted from emotional and informational support from their supervisor.

“Erm I’m quite lucky in that I have a good working relationship with my supervisor of midwives so I accessed her. So I kind of had debrief sessions with her really about what had happened looking at the notes.” [ID 129 HH]

“I have to say I have a very good supervisor I can go and talk to. And did talk to me about it – in fact rang me after I’d slept obviously cause it was a night shift. And my manager rang me as well before she came on shift because she was informed.” [ID 25 LL]

6. Wanting or needing to talk about the event

6.1. “Getting it off your chest” (HH and LL)

Midwives in both groups valued the opportunity to talk about the event in order to ‘let go’ of feelings.

“Once you’ve talked to somebody about it properly it’s as if a weight is just lifted off your shoulders and you can actually speak about it and you feel like you, you know you’ve just got it off your chest and you can sort of move on in a way.” [ID 433, HH]

“I do think talking about things is a wonderful tonic.” [ID 294, LL]

6.1.1. Needing to be mindful of who you talk to (HH and LL)

However, midwives were mindful of who they spoke to about the event, being aware of the need for confidentiality and the potential to cause concern in other people.

“I didn’t want to talk within my social network or you know with my friends because obviously that’s breach of confidentiality, you can’t talk, you can’t talk to anybody” [ID 242, HH]

“I think if I’d spoken to a friend who was not another midwife or nurse about this well I think they’d just find the whole thing so awful and so horrifying. I think it might upset them and maybe they’d worry if they were then pregnant that might happen to them or, I don’t know.” [ID 320, LL]

6.2. Speaking to colleagues (HH and LL)

Speaking to colleagues about the event was a valuable source of support for midwives in both groups, however it was more prominently reported by midwives with low distress ($n=15$) compared to those with high distress ($n=3$).

“I did speak to a couple of colleagues at work who I was particularly close to and I actually spoke to them in more depth than the rest of the people that would come up and speak to me” [ID 15, HH]

“So it was good to talk. It definitely was good to talk” [ID 108, LL]

“It’s an interesting point that almost opposite every hospital with a maternity unit there’s usually a pub and actually you know when I was working – I mean both these incidents happened at the same hospital in [city mentioned] and there is a pub you know only a couple of 100 metres away and I can’t tell you after how many shifts me and sort of various friends, you know work colleagues, other midwives went over and had a glass of wine or a pint to some extent afterwards and sort of debriefed about it.” [ID 283, LL]

6.2.1. Value of speaking to those with similar experiences (HH and LL)

Speaking with colleagues who have similar experiences in midwifery was particularly

valued. This could involve a similar experience of a particular area of midwifery, a similar length of time qualified, or somebody who has also experienced an adverse perinatal event.

“I had a conversation with somebody at work who’d had a very, very similar scenario and how they had got through it and the outcomes that happened eventually and that did something to reassure me” [ID 15 HH]

“Yes we chatted about it and we both felt exactly the same. I mean my colleague has been qualified longer than I have. But we found out that how we were both feeling was the same as each other” [ID 445, LL]

“So I think there is definitely you know a source of support from the sort professional subculture in a way that you know only somebody who’s been through what you’ve been through can understand you know how you cope with it.” [ID 283, LL]

6.3. Speaking to partners (LL only)

Another valued source of support for midwives with low distress was the ability to speak about their experiences with partners;

“Yeah and just being upset by the whole – you know you have to sort of offload and my partner gets it when I come home [laugh]” [ID 207, LL]

“My husband’s almost a midwife by proxy I think really [laugh]” [ID 391, LL]

“My husband particularly has been absolutely brilliant, he helps a lot” [ID 57, HH]

However there were contradictory statements made by a minority of midwives, who felt that the support from partners was limited.

“And it’s no good coming home and trying to explain something to your husband because they don’t really understand the seriousness of it all.” [ID 108, LL]

6.4. Feeling the need to seek professional input (HH only)

An additional source of support, only reported by midwives with high distress, was a perceived need to seek professional (external) input.

“What I did do was actually invest in, I think they now call it person centred therapy, I paid for myself to go to a counsellor, actually just to talk to somebody that didn’t know me.” [ID 242, HH]

“It’s been easier just to have counselling - to kind of talk it through with somebody that way.” [ID 57, HH]

6.4.1. Knowing that additional support was available but not feeling this was necessary (LL only)

The need to seek professional input was not reported by midwives within the low distress group. There was an acknowledgement that this was available, but not necessary.

“I don’t know, I’m quite a talkative person [laughs] I had at the time I had a very good social network, mostly involved within the hospital and I think, looking back I don’t, I think I had enough support, I feel, in that situation. I don’t necessarily feel that now for some of the midwives that I work with but with that particular situation I felt that I was alright.” [ID 454, LL]

“So there were lots of people I could talk to. I didn’t, because I didn’t feel the need at that point. But there was a process I could go through if I felt I needed to.” [ID 445, LL]

Summary

Midwives valued the opportunity to learn from their experience and improve their future practice, in order to prevent a similar occurrence (or feeling a similar way) in future. There was a need to feel absolved of blame, where midwives attempted to speak with parents and find out information about the event in order to re-establish their perspective of blame. Reassurance was sought through two different strategies in either group. Midwives experiencing high levels of distress benefitted from sympathetic reassurance from colleagues. Midwives with low levels of distress reported benefitting from being able to talk through the event from chronologically.

The majority of midwives felt supported by peers following the traumatic perinatal event, however for a proportion of midwives in the high distress group there was a perceived need to seek external, professional input from a counselling service. There were mixed

perceptions around the support of senior managers and colleagues. A small number found (especially supervisors) to be supportive of their situation. Others felt that their response was punitive, and didn't acknowledge their own personal situation. Given the prominence of vulnerability experienced by midwives following traumatic perinatal events, acknowledgement and support from higher management should be paramount. However, this subtheme identifies a concerning aspect of midwives' experiences, where they sought support but it was either non-existent or unavailable.

3.4 Section four: Reflective statements

Aspects included within this section relate to reflective comments made by midwives about the change in their response or perception over time, and comments made about the general context of their experience in midwifery. There are four themes, 'needing to acknowledge the impact and allow time to overcome,' 'working within the context of a stressful job,' 'gaining acceptance,' and experiencing events that 'contradict expectation.' Elements of each theme were reported by each symptom group. An outline of themes and subthemes is presented in table 5.7.

Table 5.7 Final template for category 4: Reflective statements

Theme: Reflections	Subtheme	Node
1. Needing to acknowledge the impact of events and allow time to overcome	1.1. Positive subsequent experiences	
	"dilute" feelings	
	1.2. It takes time to overcome the impact	
	1.3. Need to acknowledge the impact straightaway and address it	
	<i>1.4. Developing resilience to adverse situations</i>	
2. Working within the context of a stressful job	2.1. Working within a 'blame culture'	
	2.2. Organisational factors perceived to 'increase the potential for subsequent events'	
	2.3. Working within the context of a stressful job	2.3.1. The job in general is causing stress

3. Gaining acceptance	3.1. Accepting that these events can, and will, happen
	3.2. <i>Accepting limitations (“we so often fix things, but this couldn’t be fixed”)</i>
	3.3. <i>Accepting the potential to become upset (“I am only human”)</i>
	3.4. Acknowledgement that building a relationship with a mother can leave you vulnerable
4. Events contradicting public perception and expectation around childbirth	4.1. “People don’t expect midwifery to be like this”
	4.2. “People always expect the perfect delivery”
	4.3. “These events are happening frequently”
5. Recognition of the need for change	5.1. Needing to feel more supported after adverse events
	5.2. Feeling unprepared for encountering traumatic perinatal events

Note: Bold= HH group only, Italic= LL group only

1. Needing to acknowledge these events and allow time to overcome

This theme included reference to the trajectory of responses to adverse events, and perceptions about how response could be better managed following future events. The first three subthemes were only reported by midwives in the high distress group. These included a belief that “positive subsequent events ‘dilute’ feelings,’ that ‘it takes time to overcome’ the impact, and a perceived need to ‘acknowledge the impact straightaway’. The fourth subtheme only relates to midwives in the low distress group. This subtheme included a description of midwives developing resilience to traumatic events over time and with each experience.

1.1. Positive subsequent events can help to “dilute” feelings (HH only)

Midwives with high levels of symptoms found that subsequent, positive events helped to lessen the negative impact of the traumatic experience.

“I had a lovely home birth last night. You know that was lovely. Restored my faith in midwifery completely. You know when you have a bad week and you have a lovely delivery experience you just think ‘oh I know why I’m doing the job now.’ Because you just think well for what crap you get as a midwife the one kind of good bit you get as a midwife makes the difference to why you just keep doing it do you know what I mean?” [ID 316, HH]

As illustrated by the above quote, experiencing a ‘lovely’ delivery helped to re-establish their motivation for being a midwife.

1.2. “It takes time to overcome” (HH only)

Midwives in the high distress group described responses to the event as enduring, and that it took time for them to gradually diminish. Whilst these midwives were still experiencing elevated levels of distress, there was recognition that over time, the negative feelings do reduce.

“You bounce back and forwards until you actually get to the final acceptance that well it happened and I could not have done anything to have prevented it” [ID 242, HH]

“And it’s only now all these – what 9 months later that I actually stop and think now – I tend to think ooh I haven’t thought about it for a week or two now. I’ve actually got that far. So it’s getting better.” [ID 251, HH]

1.3. Need to acknowledge the impact straightaway and address it (HH only)

There was a tendency for midwives with high levels of distress to report initially attempting to ignore their feelings in order to carry on in their job. However, midwives reported that this made feelings worse, and recognised a need to acknowledge how they felt at the time rather than covering it up.

“At the time I just thought no, you’re fine, get on with it - you know? Just get back to work and get on with your life you know. But as I say then something else happened and I just knew I couldn’t go on I had to get some help.” [ID 296, HH]

“I kept struggling through to work through it. And I think that if I had taken time out then, and I could have had some therapy- proper therapy you know with somebody

experienced with somebody who knows what they are doing. And I don't know whether I would have had antidepressants then." [ID 203, HH]

As illustrated in the below quotes, midwives recognised that trying to carry on without acknowledging the impact could hold implications for their capacity to provide care, and contribute to becoming ill at a later date.

"Because midwives tend to, try and forget it and then it sort of implodes on them for some reason. And then lots of people have got ill or whatever." [ID 203, HH]

"...as a practitioner, you know, if it's not taken into control- you could go and make more mistakes because you're not functioning, you know." [ID 242, HH]

1.4. Developing resilience over time (LL only)

Midwives with low levels of distress described developing resilience to subsequent events as a result of their traumatic experience. Therefore there was a constructive response to traumatic encounters, which aided their future practice.

"So, so many more challenges have come along that you're dealing with on an everyday basis that you couldn't keep worrying about that one thing that's happened because otherwise you wouldn't cope with today and next week and the week after. It's just dulled. The whole situation has just been put into its place" [ID 320, LL]

2. Working within the context of a stressful job

This theme included references made by midwives about their perception of the context of traumatic events and overall organisational climate. Midwives in both groups reported aspects of each of the three subthemes. The first two subthemes, 'working within a blame culture,' 'organisational aspects increasing potential for subsequent events,' were reported by both groups. The final subtheme demonstrated a distinction in the perceived nature of their midwifery role. Midwives with high levels of distress perceived their role to be stressful due to limitations in resources and high demands. Midwives in the low distress group however reported a more generalised perception that the midwifery role can be daunting due to the level of responsibility it ensues.

2.1. Working within a 'blame culture' (HH and LL)

Midwives perceived that they worked within a 'blame culture,' and felt that adverse occurrences were naturally followed by attempts to assert culpability within their working environment. There was a perception that, generally, this culpability was often attributed to the midwife involved.

"It's the environment that we work in. It is a blame culture whatever you say at the end of the day it's a blame culture and nobody's going to tell me it's not. And as much as your managers will say it's not a blame culture it is a blame culture that we work in." [ID 316, HH]

"Unfortunately in this country there is a blame culture in maternity services that parents do want to blame the midwife when anything goes wrong you know and everybody expects a wonderful outcome and unfortunately babies do die in this country of unknown causes." [ID 172, LL]

2.2. Organisational aspects perceived to 'increase potential of subsequent events' (HH and LL)

There was also a perception that some aspects within their organisation contributed to, or increased the likelihood of encountering traumatic perinatal events. Midwives perceived busy working environments, limited staff members and access to resources as associated with and contributing to their experience of a traumatic perinatal event.

"But it's so- what I feel is they force you into these emergency situations and the way that everything is organised is just dangerous in some ways. You know? And this becoming more and more with all the staff shortages and whatever. So it is sort of, you have got high-risk women who are perhaps in the wrong place, with the wrong staff, and it is so busy and people are getting transferred from other units and then women who should be induced aren't and their babies are dying." [ID 203, HH]

"I mean it's not always stressful, don't get me wrong, we have some lovely days but nowadays it's so busy it's like midwifery on speed, honestly it's, when I qualified as a midwife, there was 3 maternity units in [place omitted], the [names omitted] and between those 3 maternity units there must have been oh maybe 18 midwives working on labour wards, maybe a few more and now when I co-ordinate at [name omitted] I'm lucky if I've got 9 midwives, so that approximately half the midwives on

a very busy obstetric unit that takes referrals from a huge area and I've got less midwives than we had 15 years ago and you know, so that makes a big difference.”
[ID 454, LL]

2.3. Working within the context of a stressful job

Midwives also reported feelings of stress from their role. However there was a distinction in the nature of stress for midwives in the low and high symptom groups.

2.3.1. The job in general causing stress (HH only)

Midwives with high levels of symptoms reported feelings of stress that were specifically focused on the lack of staff, morale and limited resources within their job role. These were factors within the organisational context that were placing increasing demands on the midwife that have the potential to be alleviated.

“I have midwives off sick and I have got to cover her clinic the next day, I have got to get people to cover her workload and they have their own workload. It is just like on-going, one thing after another. Just my job. I can retire in two years if I want to!” [ID 10, HH]

“It is difficult. To keep a team motivated, and provide good care for your women, but then you have got politics and no support.” [ID 10, HH]

“You’re always trying to get yourself up to a good level in terms of skills and there’s always other people that work in the same environment that are critical of people. I think it’s a very critical environment sometimes. I think that’s what it is.” [ID 316, HH]

2.3.2. Feeling daunted by the extent of responsibility within their role (LL only)

However midwives in the low symptom group reported feelings of stress that were more generalised, and instead related more to the high level of responsibility that is intrinsic to the midwifery role. This was a generalised recognition of the role that they held that, although stressful, could not realistically be reduced or absolved.

“Basically every day we go to work you just put your life on the line really, your career on the line that’s how it feels. This is just one really easy example of that.”
[ID 223, LL]

“You have immense power in midwifery and obstetrics and actually you know through a very poor decision in minutes or even seconds you can alter somebody’s life completely” [ID 283, LL]

3. Gaining acceptance

This theme related to midwives’ gaining a sense of acceptance for the potential for adverse perinatal events to occur. Midwives in both groups acknowledged the inevitability for adverse events to occur despite attempts to stop them. Midwives with low levels of distress also reported an acceptance of personal limitations to control adverse situations and the potential to become upset after such events. Finally there was an acceptance within midwives with high distress that building a relationship with the mother could leave them vulnerable to adverse responses following traumatic perinatal events.

3.1. Accepting that adverse events can, and will, happen (HH and LL)

Midwives reported a sense of acceptance about the likelihood of adverse perinatal events occurring. Comments included recognition of events occurring ‘by chance’ and that they will inevitably happen at one point or another during their career.

“You can’t prevent it from happening no matter how scientifically advanced we get.” [ID 129, HH]

“...sadly within our jobs we are probably all at some stage going to meet something like a stillbirth a neonatal death, things are you know and sometimes these things happen suddenly, are not expected and you know they can be traumatic” [ID 293, LL]

3.2. Accepting limitations (“we so often fix things, but this couldn’t be fixed”) (LL only)

Midwives with low levels of symptoms also commented about the realistic limitations that they have in relation to improving adverse situations. This denoted an acceptance of personal limitations and that, despite the best of intentions or abilities, some events cannot be improved.

“You know we so often fix things. You know it’s like oh well this is bad but oh look we’ve fixed it.” [ID 223, LL]

“I suppose for me it made me rationalise that you know you can do your very best for somebody but still have a poor outcome and that doesn’t mean it’s anybody’s fault it’s just that you know we’re not gods and we can’t solve everything.” [ID 283, LL]

3.3. Accepting the potential for to become upset (“I am only human”) (LL only)

Midwives with low levels of symptoms also reported an acknowledgement that the event contradicted personal expectations of capability to not become upset by adverse events, and recognised that they were perhaps more vulnerable than they had previously realised.

“I think that’s... I expected to be able to cope with it and I didn’t and that in itself is a bit of a surprise perhaps. It makes you feel a bit more human and not like a machine when you go to work.” [ID 25, LL]

“You are trained really to deal with that situation, but it doesn’t make it any easier.” (ID 387, LL)

“If I’m truthful I think you do acclimatise to working in a field that has – you know most shifts that I work on I’m having to give bad news at some point during that day and so you do acclimatise. You do toughen up in a sort of way and then something massive like this situation I’ve described to you comes along and makes you realise that actually no you’re not totally organised and equipped at all you know you’re just as fragile as everybody else kind of thing.” [ID 320, LL]

Therefore those with low levels of symptoms reported a greater level of acceptance about the inevitability of adverse events, specific expectations about their capacity to improve them and also the realistic potential to be personally affected by the experience.

3.4. Acknowledging that building a relationship with a mother can leave you vulnerable (HH only)

Midwives in the high symptom group identified that building a relationship with mothers could leave them more vulnerable.

“So [laugh] for some people you know sometimes I do wonder why they don’t really seem – well I mean obviously it is a job but they don’t seem to have the same caring

level that I would have. In a way that's good though isn't it because then they wouldn't get disturbed by situations as much as me and yeah." [ID 212, HH]

"But somebody like that that you've looked after from the minute you've got pregnant you know you get very attached [...] So each time they lose a baby you know it's very traumatic for everybody." [ID 358, HH]

4. Events contradicting public perception and expectation around childbirth

There was a reference to the difference between the way in which childbirth, and midwifery as a profession, differed in reality to the public perception or expectation. This juxtaposition between expectation and reality influenced midwives' feelings of guilt when they were 'unable' to deliver the expected result. It was also associated with midwives' wry acknowledgement that their experience of trauma 'as a midwife' was contradictory to what other people would expect.

4.1. "People don't expect midwifery to be like this" (HH and LL)

There was a perception that traumatic perinatal events contradict public expectation of midwifery as a profession. This involved expectations of midwifery as a career, where midwives felt that the general public perception does not acknowledge the true extent of their duties.

"I just – people, the general public, their perception – if you say I'm a midwife they say 'oh what a lovely job, you're so lucky you're a midwife. How wonderful' And I think often if only you really knew sometimes what... you know what we have to do, what we have to say to people. You know, 'I'm sorry to tell you I can't hear your baby's heartbeat. I can't see it on the scan.'" [ID 129, HH]

"You know people think midwifery is the best job in the world but when it goes wrong it's crap, and just accepting that really." [ID 362, LL]

4.2. "People always expect the perfect delivery" (HH and LL)

Midwives also felt that traumatic perinatal events contradict public expectations about childbirth. As illustrated in the second comment (ID 25), being aware of the expectations of parents exacerbated feelings of guilt when the birthing episode contradicted this.

“In this day and age everybody expects to have a perfect delivery and a perfect baby” [ID 251, HH]

“you can do all you can and it still doesn’t always work, which is not what people come in for when they expect to come out with a nice, happy baby don’t they - that’s there laughing and crying with them, that they can take home, and you know you feel a bit of a failure yourself if you can’t achieve that for them.” [ID 25, LL]

4.3. “These events are happening frequently” (HH and LL)

The contradiction between the perceived expectation around labour and birth, and the likelihood of traumatic perinatal events occurring was further illustrated by the perception held by several midwives that adverse events happen frequently, and their occurrence was becoming more frequent,

“There’s so many other instances I’ve got, I’ve got loads of them. “ [ID 203, HH]

The perception that adverse perinatal events occurred frequently was not reported universally however, and a small number of midwives felt that, fortunately, the events were rare.

“I mean it doesn’t happen as run of the mill thank god” [ID 362, LL]

5. Recognising a need for change

Midwives felt that aspects of their working environment could be amended to provide more personalised support for them, should they experience another event in the future as traumatic..

5.1. “There needs to be a greater acknowledgement of the impact these events can have on midwives” (HH and LL)

There was a degree of acknowledgement within both groups that the environment within which they work in was not always the most supportive for midwives.

“I think there needs to be two bodies and I think one is that as you say somebody that they can go and talk to on a counselling basis but also there has to be that risk side where they do look at cases, they do examine them and will talk to people afterwards either individually or as a group if situations have gone wrong, if cases

have gone wrong to change you know, procedures or change you know the way people are. So there needs to be the two aspects really.” [ID 293, LL]

“I’m a midwife that’s been in the field for a number of years, and I’m quite aware that there needs to be some, a better support network particularly for the younger midwives and you know, or less experienced midwives coming forward because those, obviously you, you know when things do go wrong you have all the feelings of guilt, should I have done anything differently, is it my fault, and it can be, you can be put in a very stressful situation, it can be isolating for some people and if they haven’t got anybody to go to, to talk to, then that obviously, you know can lead to you know people having unnecessary time off work, depression.” [ID 293, LL]

“There is still a need today for something other than a supervisor that needs to be paid for, counselling or what if the midwife doesn’t accept the counselling, would she talk to somebody you know at the other end of a phone that she’s never met before and I mean these are not just midwives in [location] where currently live, you know they’re through a network that I’ve got people you know through my experiences that I will help them because I’ve always made it known.” [ID 242, HH]

“It would have to be someone that was more senior to me because if anyone – I think it would be an easy thing to say for a kind of more supportive junior member of staff to say oh I’m sure you didn’t do anything wrong. I don’t mean a flippant comment. I mean... we’ve looked at your notes, we’ve looked at the care, you haven’t done anything wrong.” [ID 129, LL]

5.2. “There’s no preparation for the impact that these events can have on midwives” (HH only)

Within the high distress group, there was also an identification of the need to increase awareness about the occurrence of adverse events, and the impact that these can have for midwives. The above extracts from the same midwife illustrate that there was a perceived lack of preparation, in terms of the education and training received.

“You don’t get any formal training. I don’t remember at any point in my training someone saying you’re going to have something that will happen to you in your career that will make you never want to go back to work and will make you doubt your ability to do your job properly. We don’t teach people that. [...] Because you

prepare soldiers on the battlefield for how they might feel when they get home. I'm not likening it to a battlefield but it's still a traumatic event." [ID 129, LL]

Summary

Reflections about experiences of traumatic perinatal events made reference to the change in symptoms over time, extraneous and general aspects of midwifery that influenced their perceptions of difficulty, and the recognition for a need to change the preparation and support provided for midwives following traumatic perinatal events. Midwives developed an acceptance of the inevitability for traumatic perinatal events to occur throughout their practice, and that they cannot always control every situation. There was reference to midwives feeling that they worked within a generally stressful environment, with some perceiving a 'blame culture' contributing to their feelings of distress. Acknowledgement of the social construction of childbirth was also a difficulty for midwives where they were aware of the public perception of midwifery as a 'happy' profession, and where parents anticipated a positive. There were some differences between groups, with midwives who had high distress reporting a regret for not immediately acknowledging the impact that their event had had on them, and reporting that their feelings diminished over time with subsequent deliveries. Midwives with low distress developed a sense of resilience over time, in relation to traumatic events they encounter at work. Midwives with low distress also demonstrated a greater level of acceptance not only for the likelihood of events happening, but for their own ability as limited and the potential for being upset following events as normal. Both groups of midwives felt that their experience could have been improved through the implementation of effective supportive strategies within their workplace.

CHAPTER 6. General Discussion

Overview of aims for the thesis

This thesis aimed to investigate the experience, perception and symptomatic consequence of traumatic perinatal event exposure in midwives. The investigation was primarily exploratory, investigating the symptomatic response to indirect traumatic perinatal event exposure, the nature of events perceived as traumatic, and the perceived impact that this had for midwives' personal and professional wellbeing. There was also a secondary investigation into the nature of response to trauma in relation to theoretical constructs of PTSD and vicarious traumatisation.

This discussion is divided into five sections. The first two sections will discuss findings from the postal survey. Section one will consider findings regarding the symptomatic prevalence and structure reported by midwives following exposure to traumatic perinatal events. Section two will discuss the qualitative findings from the postal survey, which provided an insight into the characteristics of factors contributing to perception of an event as traumatic by midwives. The third section will consider findings from in-depth qualitative interviews with midwives who were experiencing high or low levels of distress following a traumatic perinatal event. Perceiving an event as traumatic will not always elicit adverse symptomatology, therefore findings considered within this section extend and elaborate on aspects intrinsic to traumatic perinatal events, reported by midwives with high and low levels of resulting distress. This section also considers the perceived impact of these events, the use of supportive or helpful strategies in managing their responses afterwards, and reflections over the change in impact over time. Following this, findings from the three studies will be integrated and implications from this thesis discussed. Finally, strengths and limitations of the thesis are considered. The chapter concludes with a summary of findings from this thesis.

1. The prevalence and prediction of traumatic stress responses following experience of a traumatic perinatal event (Study 1a)

Characteristics of this sample

Midwives in the final sample were demographically similar to qualified midwives in the United Kingdom (UK) in terms of age and gender (NMC, 2008; DOH, 2010). The proportion of midwives in this sample with a personal trauma history, unrelated to childbirth, was slightly lower than percentages reported within community samples (HSCIC,

2007). In addition to this, the proportion of midwives perceiving a personal experience of giving birth to be traumatic was slightly lower than proportions reported by previous research with mothers in the UK (Olde et al., 2006). The percentage of midwives seeking support from their GP for issues relating to their mental health was greater than national population and community averages considered representative of the UK within the (MHF, 2007). However, as the sample was predominantly female, it is possible that this contributed to a higher prevalence (MHF, 2007). Therefore, despite a low response rate (16%), midwives within this sample were generally representative of midwives within the UK in terms of age, gender, mental health history and personal trauma history.

The nature of exposure to traumatic perinatal events

Midwives experienced events that they perceived to be traumatic through both witnessing them in person, and listening to an account of them from a woman in their care. Only a minority had experienced events they perceived to be traumatic exclusively through listening to them. The theory of vicarious traumatising posits that repeated exposure to traumatic accounts can elicit negative and enduring alterations to worldview beliefs (Pearlman & Mac Ian, 1990). PTSD can occur after witnessing, listening to or directly experiencing a traumatic event (APA, 2000; 2013). Therefore, in terms of exposure alone, consideration of a PTS framework, rather than an additional dimension of VT, is more appropriate.

Prevalence of posttraumatic stress

A third of midwives within this study reported current posttraumatic stress symptoms at levels indicative of clinical relevance following exposure to a traumatic perinatal event. This is the first large-scale empirical study to report the proportion of midwives in the UK with symptoms commensurate with clinical PTS after experiencing an event perceived as traumatic whilst providing care to women. A similar prevalence (33%) was also been recently reported by American labour and delivery ward nurses after experiencing trauma whilst providing care to childbearing women (Beck & Gable, 2012). The sample mean for PTS was approaching, yet below, the cut off used to infer clinical relevance; however, some midwives reported very high levels of posttraumatic stress symptomatology. Findings indicate that a subsample of midwives are experiencing symptoms of PTS at a clinically relevant level, following experiencing an event occurring to a mother in their care that they perceive to be traumatic. However, this research is cross sectional and cause and effect cannot be inferred.

Given the small proportion of midwives within this sample reporting exclusively listening to trauma, disaggregation of symptomatic response type following witnessing or listening to events was not viable. However, midwives who had exclusively listened to trauma ($n= 19$) reported on average more positive worldview beliefs in comparison to other midwives who had also witnessed traumatic perinatal events ($n= 297$). The difference in group size here will limit the any strength of conclusion that can be drawn from this finding. However, it is indicative of worldview beliefs aligning with symptoms of posttraumatic stress and increasing in severity for those with both witnessed and listened to exposure.

Midwives that perceived that they had experienced more traumatic perinatal events, had experienced these through both types of exposure (i.e., witnessed and listened to), had personally experienced trauma within their lifetime and were more empathic towards other people reported more severe symptoms of PTS. These variables in combination significantly predicted the extent of posttraumatic stress. The frequency and extent of perceived event exposure were unique predictors of PTS, suggesting that midwives with more perceived experiences, and who experienced trauma through witnessing and listening to it, were at significantly greater risk for PTS symptoms. This suggests a potential cumulative symptomatic response to traumatic perinatal event exposure. However, the amount of variance explained within this model was low. Therefore, despite these variables being identified in the wider literature as associated with or predictive of PTS, their predictive utility within this sample was limited.

Studies with other health professional groups report an association between the level of experience within a professional role, and the extent of traumatic stress following perceived event exposure; however, the direction of this association is inconsistently identified with some studies reporting less experience as associated with PTS symptoms (e.g., Beck & Gable, 2012) and other studies reporting greater experience as associated with PTS symptoms (e.g., Jonsson & Segesten, 2004a). However, within this study of midwives there was no association between the extent of experience in midwifery and their level of reported PTS symptomatology. This suggests that the extent of experience held within the midwifery profession was not associated with an increased (or decreased) risk for developing PTS symptoms following exposure to traumatic perinatal events.

Posttraumatic stress and worldview beliefs

Contrary to predictions, there was no association between worldview schema and midwives' experience in the profession, empathy or personal trauma history. Furthermore, the extent of

exposure to traumatic perinatal events and the total number of traumatic experiences was not associated with the negativity of worldview schema. According to the theory of VT, alteration to worldview schema is a cumulative response to repeated exposure to indirect trauma (McCann & Pearlman, 1990). Findings within this study are inconsistent with this preposition; however, without longitudinal and prospective assessment there is a limitation in the conclusions that can be drawn regarding the cumulative nature of alterations to cognitive beliefs.

There was however a moderate association between greater symptoms of posttraumatic stress and more negative worldview beliefs. This suggests that emotional and behavioural responses of PTSD (intrusion, avoidance and arousal) were aligned with the nature of worldview beliefs. Several theories of posttraumatic stress acknowledge the role of cognitive schema and appraisals in both the development and maintenance of posttraumatic stress symptomatology (Ehlers & Clark, 2000; Foa & Rothbaum, 1998; Janoff-Bulman, 1989). Beliefs about the world can influence the nature of appraisals formed about the nature of the traumatic stressor, the role played by the individual within it, and the appraisals formed afterwards (Foa & Rothbaum, 1998; Ehlers & Clark, 2000). Therefore findings from this study are in line with these theories, and are indicative of the relationship between greater PTS symptomatology and more negative worldview beliefs. However, due to the correlational and retrospective design of this study, its direction of effect is unclear. It could be that midwives' beliefs about the self, world and others people were contradicted by the occurrence of a traumatic perinatal event, which contributed to the extent of disruption and symptomatic responses afterwards (Ehlers & Clark, 2000). However it could also be that midwives' perceptions of the self, world and other people were negative prior to the event and the occurrence of a traumatic perinatal event provided confirmatory evidence (Foa & Rothbaum, 1998). The relationship between worldview beliefs and PTS symptomatology has been reported to be potentially bidirectional (Dekel, Paleg & Solomon, 2013). Without implementation of a prospective research design, assessing cognitive schema prior to and following event exposure, it is difficult to ascertain the contribution of cognitive schema for the development of PTS response.

Symptom structure: Posttraumatic stress, worldview beliefs and burnout.

Prior to this thesis it was not clear whether midwives would experience symptoms of PTS or the cognitive alterations associated with VT. Midwives could potentially witness and listen to accounts of traumatic perinatal events, which was different to other health professionals who are exclusively exposed to trauma through witnessing (i.e., ambulance drivers) or

through listening to accounts of trauma from a recipient of their care (i.e., therapists). It was hypothesised that a reconceptualization of response would be required. Factor analysis of responses for posttraumatic stress symptoms, worldview beliefs and burnout syndrome mainly loaded with other items from their respective subscales. This suggests that responses to traumatic perinatal events largely reflected constructs symptoms of posttraumatic stress (intrusion, avoidance and arousal), worldview beliefs (about the self, world and other people), and burnout (emotional exhaustion, depersonalisation and personal accomplishment), and that a reconceptualization of response was not required.

Perceived impact on personal and professional well-being

The perceived impact of experiencing a traumatic perinatal event was complex and multidimensional. Midwives reported both beneficial and adverse aspects of impact on their personal and professional lives. The perceived beneficial influence is congruent with the notion that experiencing an adverse or traumatic event can sometimes have a positive impact on the individual, conceptualised as posttraumatic growth (PG; Linley & Joseph, 2004).

There are several theories relating to the development of PG; however, there are a number of common denominators accounting for the development of a positive impact (Linley & Joseph, 2006). The trauma information is contradictory to previously held beliefs and schema and elicits a ‘shattering’ of these, similar to the shattering proposed in Janoff-Bulman’s (1989) theory of shattered assumptions in PTSD. This is followed by rumination, where the individual attempts to ascertain the significance and meaning of the traumatic event (Zoellner & Maercker, 2006). Through ruminating about the event, the individual reconstructs their previous schema so that they are congruent with the traumatic event information. This processing can result in the assimilation of event-related information into existing schema, which theoretically can result in distress, or it can result in the accommodation of event-related information into schema, a process that entirely reconstructs previously held beliefs so that they are congruent to the new information (Joseph & Linley, 2005). It is the accommodation of schema that, when positive in nature, results in PG (Linley & Joseph, 2006). PG is not mutually exclusive to distress, and theorists posit that distress is likely to occur alongside PG. Furthermore, empirical assessments using standardised scales for PTS and PG often report either an absence of association, or a positive association, between responses (Zoellner & Maercker, 2006).

Midwives reported feeling more confident following their experience, more able to support both mothers and midwives, and perceived themselves more able to assert their opinion in

practice. There was also a greater acceptance of limitations and the inevitability of events to occur. These responses are reflective of the dimensions of change associated with PG (Linley & Joseph, 2004) and indicate appraisals of the event relating to PG. Therefore it must be noted that the experience of a traumatic perinatal event does not exclusively result in negative impacts within midwives, and that there is evidence of positive and constructive changes occurring following these events.

However, the perceived adverse impact of traumatic perinatal event experience influenced midwives' personal and professional lives. There was a highly significant and strong association between PTS symptomatology and the level of perceived impairment experienced within work, home and social life domains, as indicated by scores on the Sheehan Disability Scale. Average scores for work ($M= 3.08$, $SD= 2.51$) social ($M= 2.41$, $SD= 2.64$) and home ($M= 3.01$, $SD= 2.91$) domains were relatively uniform in comparison to each other. This indicates two aspects. Firstly, that there was no one aspect of life that was particularly more impaired than the other following exposure to a traumatic perinatal event. Secondly, it highlights the permeating impact of event exposure and response for midwives that extended beyond work life, and incorporated aspects of personal life as well.

Over a third ($n= 148$) of this sample had seriously considered leaving the midwifery profession following a traumatic perinatal event experience. Twenty percent ($n= 82$) had changed their professional allocation on a short-term basis, and 14% ($n= 57$) had done so on a long-term basis. This highlights the impact that exposure to events perceived as traumatic had on midwives and their professional practice, and demonstrates that exposure could impact upon intentions to remain within a particular professional allocation, or the midwifery profession in general. The severity of midwives' PTS symptomatology was predictive of whether they had considered leaving the profession after their traumatic perinatal event experience. Appraisal of a traumatic event and its impact on oneself can theoretically influence the development of PTS symptomatology (e.g., Ehlers & Clark, 2000). Furthermore, a recent experimental study identified an association between implicitly identifying the self as 'traumatised,' and the subsequent development of PTS symptoms (Lindgren et al., 2013). However, findings from this study are limited by the nature of the sample. Midwives within this sample were all currently working within the profession. Therefore although their experience had resulted in their *considering* leaving, it had not resulted in them *actually* doing so. Further research using exit data from the midwifery profession would enable further insight into the association between experiencing traumatic perinatal events and leaving the profession, or changing allocation.

Prevalence and prediction of burnout syndrome

A profile of burnout is indicated by high levels of emotional exhaustion, high depersonalisation and a low level of personal accomplishment. Midwives within this sample reported moderate emotional exhaustion, low depersonalisation and low personal accomplishment. However, nearly 40% of midwives were experiencing high emotional exhaustion, four percent were reporting high depersonalisation, and over 50% reported low personal accomplishment. Therefore, a proportion of this sample were experiencing elements of burnout to a high degree. In comparison to other studies with midwives, this sample was reporting a greater level of emotional exhaustion, less perceived personal accomplishment and a slightly more depersonalisation (Bakker et al., 1996; Mollart et al., 2013). Therefore, in terms of mean scores, this sample reported scores indicative of a greater level of burnout.

Symptoms of burnout were highly associated with both symptoms of posttraumatic stress and worldview beliefs. Burnout symptoms were also significantly predicted by the combination of posttraumatic stress and worldview beliefs. This indicates that midwives who experience traumatic perinatal events and respond with symptoms of posttraumatic stress may be more vulnerable to additional responses of burnout as well. Burnout is associated with greater staff turnover and absenteeism, a reduction in capacity to provide sensitive care, and a reduction in accomplishment (Maslach et al., 2001; Leiter & Maslach, 2009). Therefore, there are potential implications for midwives personal and professional wellbeing following exposure to events within the perinatal period that are perceived as traumatic.

2. The nature of traumatic perinatal events (Study 1b)

The quantitative aspect of the postal survey provided an indication into the symptomatic structure, prediction and prevalence reported by midwives following indirect exposure to traumatic perinatal events. The qualitative aspect of the postal survey provided a further insight into the nature of events perceived as traumatic by midwives; insofar as the characteristics of events that can determine perception of it as traumatic. As proposed within the hypothetical model of response (see chapter 1), aspects relating to the context surrounding the event, professional factors and personal aspects were theoretically associated with the perception of an event as traumatic in other health professionals. Findings from the qualitative analysis of descriptions confirmed and extended elements of

this model. Midwives reported aspects intrinsic to the event ('what' happened) and factors extrinsic to the event (involving parents, other colleagues, contextual factors and personal salience) that contributed to perception of an event as traumatic.

The profile of a traumatic perinatal event

Traumatic perinatal events occurred suddenly and without warning, involve a high degree of severity or complexity, and were difficult (or perceived as impossible) to control. Whilst perception of an event is subjective, there is evidence to suggest that the objective severity of an event can predict posttraumatic stress responses (Ehlers, Mayou & Bryant, 1998). This is reflected in the high level of severity that was present in some of the described events. The descriptions also involved events that were difficult to control or improve. This suggests that perceived helplessness was also an important determinant of perceiving an event as traumatic. Whilst the occurrence of unpredictable, severe events is a natural aspect of childbirth and cannot always be prevented, this finding provides an insight into the nature of events that could be perceived as traumatic for midwives.

Aspects increasing difficulty during the event

In addition to the severity of an event, there are additional aspects relating to the environmental context, personal context or previous experiences that may also influence perception of an event as traumatic. The impact of predisposing factors have been found to be effective in identifying risk of PTS responses following trauma regardless of the extent of severity of the traumatic event (Breslau et al., 2013). Within the descriptions provided by midwives, there were several aspects identified that were intrinsic to the context of the event, relating to the parents, other colleagues, personal salience and organisational context.

Aspects relating to parents

Midwives described events where they knew the mother on either a personal or professional level and had built a relationship with them prior to the event. Building a relationship with a mother is an important aspect of midwifery care (DOH, 2010). It is perceived to facilitate sensitive care and can also be a source of job satisfaction for midwives (Thomas, 2006; Hunter, 2006). However, this finding suggests that building a relationship with parents increased the likelihood of perceiving an event as traumatic. Building a relationship with a woman is likely to increase feelings of identification for their experience, and provide a deeper level of context for the situation (Figley, 1995). Identification has been identified as increasing vulnerability to traumatic stress in other health professional groups (e.g.,

Goldblatt, 2009). Findings within this sample suggest a similar source of vulnerability for midwives in the event of an adverse incident.

Furthermore, midwives reported difficulty witnessing parents in distress and breaking bad news. Similar to the previous finding, this indicates a level of empathic engagement with midwives and the women in their care. Empathy is defined as the affective and cognitive ability to recognise and experience other people's emotions and mental states (Lawrence et al., 2004). Empathy theoretically facilitates the internalisation of another person's trauma (Figley, 1995), and can therefore increase the extent to which an event experienced indirectly is perceived as traumatic. Midwives reported aspects of identifying with women and their partner's experience as influencing their own feelings of difficulty within the situation. Within the postal survey, midwives' levels of empathic concern for other people was partially predictive of their level of PTS responses, and midwives with greater empathy for others reported greater symptoms of PTS symptomatology. Therefore these findings in combination highlight the role of empathy in contributing to perceptions of an event as traumatic.

Midwives' perceptions of difficulty also encompassed elements relating to the relationship with parents. This included instances where midwives felt mothers did not follow professional advice, or where communication was difficult due to a language barrier. Aspects within this theme highlighted feelings of frustration and helplessness. Midwives are advocates of woman-centred care, and value their role in empowering women to give birth in a way that they choose (NMC, 2013; Thomas, 2006). However, in the episodes described, midwives needed women to follow advice that contradicted their choices around birth, due to the development of an emergency situation. Therefore, midwives' priorities needed to adjust to the urgency of the situation, despite the mother's personal preference.

Personal salience

Some midwives described themselves as being newly qualified at the time of the adverse perinatal event occurring, which suggests that their level of experience in the profession may contribute to perception of an event as traumatic. However, the number of years that midwives had been qualified in the profession was not statistically associated with PTS symptomatology within the postal survey (see section 1). Therefore, this suggests that a limited professional experience may contribute to perception of an event as traumatic, but not necessarily to the severity of symptomatic response. However, inference regarding the impact of experience in the profession is limited within this sample. Midwives were all

currently working within the midwifery profession, therefore the sample inadvertently represents those *with* experiences of traumatic perinatal events but that have *remained* within the profession. Given the association between low experience and increased risk for PTS (e.g., Beck & Gable, 2012) it is likely that some midwives may have left the profession following experiencing a traumatic perinatal event, and therefore these midwives are not represented within this sample.

The organisational context

Midwives described events where they were unable to access additional resources or personnel when required. This highlights the role of the wider working context on midwives' perception of an event as traumatic. Difficulty was sometimes attributed to working within a busy environment, which lead to delays. Busy working environments and staff shortages have been previously attributed with increasing difficulty for nurses when adverse situations arise (Austin et al., 2009), and this finding reiterates this difficulty within a midwifery population. Sometimes midwives reported difficulty when the environment within which the event occurred was physically distant from the source of additional help. Although this sometimes involved home birth situations, it was not the home birth situation alone causing an increased sense of difficulty. The physical distance from additional help (be that home birth situations, midwife led units, or wards that were far apart within a hospital) was the focus of difficulty for midwives. This distance introduced an additional delay in accessing (or prevented access entirely) further help, as midwives needed to wait for ambulances to arrive and transfer into hospital.

Aspects relating to colleagues

There was evidence of midwives feeling unsupported by their colleagues during the event, feeling concerned over the abilities or conduct of another professional, or experiencing interventions that were perceived to be 'overly forceful.' These elements relate to events where midwives felt isolated in their practice, or experienced instances of care being provided in a way that they personally did not agree with, and that they felt held a detrimental impact for the mother. These aspects can be interpreted as indicative of perceptions held by midwives about the adequacy of care provided for mothers within a birthing situation. Perception of inadequate care has been identified as a predictor of traumatic stress responses in obstetricians and midwives following experiences of loss, miscarriage and neonatal death (Wallbank & Robertson, 2013). As with many health professionals, midwives are committed to providing the best care possible (Thomas, 2006),

and therefore experiencing instances where the care provided is perceived to deviate from this is likely to impact upon feelings of distress.

Difficulty after the event

Both witnessed and listened to accounts made reference to the involvement of professional investigations and culpability after the event. The witnessed accounts referred to instances where the midwife was blamed for the event occurring. The heard accounts included reference to the mothers feeling blamed by other midwives for the event. This aspect highlights the role of factors occurring *after* the traumatic perinatal event as contributing to feelings of difficulty. Adverse events occurring around labour and birth are often investigated (at least at the internal level) in order to identify the cause (NMC, 2011). The fact that midwives reported aspects of blame and investigation after the traumatic perinatal event experience could highlight the importance of this detail in determining an event as traumatic. It could also, however, indicate an aspect of protocol within the midwifery profession. Interpretation is limited within this study as the described events were short. However, aspects relating to guilt, blame and perceived culpability were reported to a greater degree of detail within the interview study, considered in section three.

Summary

Findings from the qualitative aspect of the postal survey complemented the hypothetical predictions drawn from previous literature and theory regarding aspects potentially predictive of perceiving an event to be traumatic. Findings identify the profile of a traumatic event as unpredictable, highly severe and difficult to control. Aspects relating to relationships with women, experience in the profession and empathy for parents were all reported as antecedent variables influencing perception of an event as traumatic. Findings also highlight potential sources of difficulty during the event, including where midwives were unable to access resources or personnel when required, and where they perceived the conduct of other professionals to be concerning. Contrary to predictions drawn from existing literature on traumatic stress, there were no reports of the impact of personal trauma experience within midwives' descriptions. However, the accounts of events were short (3-4 lines long) which may have limited the extent to which midwives could elaborate on additional antecedent variables influencing their perception of the event as traumatic.

3. An in-depth investigation into the experience and perceived impact of traumatic perinatal events (Study 2)

Section two considered aspects intrinsic and extrinsic to an event that determined perception of it as traumatic by midwives. However, not all individuals who are exposed to trauma will develop an adverse symptomatic response (Breslau, 2009; Lukascheck et al., 2013). Therefore the in-depth interview study with midwives who had either high or low levels of resulting distress (indicated by PTS symptomatology and perceived impairment) provided a further insight into the experience, impact and perceived consequence of traumatic perinatal event exposure in midwives who a) perceived the event as traumatic and b) responded to it with varying levels of distress. The interview study involved detailed investigation into the perceived experience of traumatic perinatal events in midwives. There was a high level of similarity in the perception of events, responses and impact, and helpful or supportive strategies reported between the two groups. Commonalities between each symptom group are discussed first, in relation to the respective sections of the analysis; event characteristics, response and impact, perceived supportive or helpful aspects and reflective statements. Distinctions between themes derived from the groups are then considered in a final section.

3.1. Event characteristics

The profile of traumatic perinatal events

As identified within the previous analysis of event descriptions (section two), there was a distinct profile to the nature of events perceived as traumatic within the interviews. This profile was reported by midwives regardless the level of resulting symptomatology. As reported within the qualitative aspect of the postal survey, events occurred suddenly and without warning. Findings from the interview study identified that these aspects contributed to midwives feeling ‘out of their comfort zone,’ where attempts to control the event were perceived as difficult, or impossible.

This finding is in line with theories about the nature of events perceived to be traumatic. Events that are unpredictable are theoretically more likely to elicit responses of traumatic stress, as they are more difficult to conceptually process than events that are predetermined (Ehlers and Clark, 2000). Reports of feeling ‘out of a comfort zone,’ suggest that there was a tendency for midwives to appraise the event as beyond their abilities. Appraisals such as this can theoretically contribute to perceiving an event as traumatic (Ehlers and Clark, 2000) and with the development of PTS symptomatology (Brewin & Holmes, 2003).

Having an existing relationship with parents

Findings from interviews with midwives confirmed that having an existing relationship with parents increased the level of perceived difficulty for midwives when experiencing an adverse incident, as previously reported within the analysis of event descriptions (section two). Midwives reported instances where they had built a relationship with a woman throughout antenatal care, or within a previous pregnancy. There were also instances where midwives had spent time with a woman just prior to the event, and within this time felt that they had built a bond. The development of a relationship such as this increased midwives' perception of difficulty when they witnessed or learned of an adverse event occurring to the woman in their care. The perception of increased difficulty sometimes related to an increased awareness of the woman's (and her partner's) situation prior to, or in relation to, the birth of the baby. For example, instances where midwives were aware that a mother had previously experienced a stillbirth, and acknowledged the contextual significance of the birthing situation for the family. This is indicative of a greater level of identification and empathy in the relationship as contributing to the midwife's experience of difficulty following an adverse incident. Having an existing relationship with parents theoretically increases the level of understanding and empathy held between the provider and recipient of care, which can sometimes increase difficulty when experiencing an adverse situation, as it can facilitate identification with their experience (Figley, 1995). Identification with recipients of care has been identified as potentially increasing difficulty in the event of an adverse situation (Jonsson & Segesten, 2003; Rice & Warland, 2013). As discussed in the previous section, building relationships with mothers is sometimes considered an important aspect of maternity care. However, these findings indicate that building a relationship was a source of vulnerability for midwives in perceiving an adverse event as traumatic.

Having limited professional experience

Limited professional experience was reported in section two as a potential contributor for midwives perceiving an event as traumatic. Findings from the qualitative study elaborate on this finding by illustrating the nature of this difficulty. There have been mixed findings regarding the role of professional experience and traumatic stress responses in other healthcare professional groups. Some studies have cited that limited experience is associated with greater traumatic stress (Beck et al., 2012; Goldbort et al., 2011), whereas others cite the opposite direction of effect (Jonsson & Segesten, 2004; Czaja et al., 2012) or no association at all (Maia & Ribiero, 2010; Kerasiotis & Motta, 2004). As reported in section one, years of experience in the profession was not statistically associated with posttraumatic stress symptomatology. However, qualitative findings within this research highlight a potential source of perceived difficulty during adverse events in midwives with limited

professional experience. Whilst this was not associated with symptomatic responses, there may be a requirement for midwives to receive additional support during adverse incidents when they are recently qualified or new to the area within which they are working.

Emotional management

Some midwives reported ‘going into autopilot’ during the adverse perinatal event, reverting to previously learnt procedures and not acknowledging how they personally felt. Therefore for some midwives with both high and low levels of distress there was neither struggle nor recognition of personal feelings within the situation. However, other midwives reported needing to manage the way they felt throughout the situation in order to appear professional and remain calm. This is indicative of emotion work, which is the management of feeling in order to appear in a way that conforms to perceived ‘feeling rules’ within an organisational climate (Hochschild, 1983, p. 7). Emotion work is associated with increased feelings of stress and can contribute to burnout (Mackin & Sinclair, 1998). Therefore for some midwives, with both high and low levels of distress, the requirement to manage personal feelings in addition to provide care during an acute situation represents an additional source of difficulty.

3.2. Response and perceived impact

Findings from the postal survey identified the prevalence of symptomatic responses reported by midwives following traumatic perinatal event exposure. The interview study enabled further elaboration into the way midwives initially responded to the event, and the perceived impact that this had.

Guilt and self-blame

A prominent response in both groups of midwives was of guilt and self-blame. Midwives reported feeling like they had ‘let the mother down,’ regardless of the perceived cause of the event. A similar finding has been identified in a smaller qualitative study of Australian midwives, who reported feeling like they had “failed” the mother, even when they were not directly responsible (Rice & Warland, 2013, p. 1060). According to the cognitive model of PTSD, the appraisal of emotional responses during trauma can determine the nature of emotional response afterwards (Ehlers & Clark, 2000). For example, feeling responsible during an event can lead to subsequent feelings of guilt (Ehlers & Clarke, 2000). Guilt and self-blame have been reported to be “deeply engrained” in the culture of midwifery (Kirkham, 2000, p. 735). Therefore, the feelings of guilt reported by midwives are consistent with theoretical prepositions and current literature on health professionals, including

midwives. Guilt was experienced regardless of the perceived cause of the event, and this highlights an aspect intrinsic to traumatic perinatal event experience. Childbirth is socially constructed as a positive, happy event for families. Therefore when events directly contradicted this anticipation, midwives experienced guilt for not preventing it from occurring.

Rumination

Midwives reported ruminating after the event, repeatedly replaying the event in order to identify a potential cause or overlooked warning sign. Rumination is defined as “persistent, cyclic” and negative thinking about a previous negative experience (Papageorgious & Wells, 2004, p. 4; Ehlers & Clark, 2000). There are different types of ruminative thoughts, with different implications for the maintenance of distress following trauma (Papageorgious & Wells, 2004). Rumination over the ‘what if’ and ‘why’ of events can maintain and predict the severity of PTS symptomatology (DiGangi et al., 2013; Ehling, Frank & Ehlers, 2008; Michael et al., 2007). The focus on ‘if only’ can prevent the necessary cognitive processing required to successfully assimilate the traumatic memory (Foa & Kizak, 1986; Michael et al., 2007). Midwives within this study described repeatedly thinking about the event (both consciously and unconsciously) in order to try and identify an aspect that was overlooked or not acted upon within the birthing situation. The process of rumination does not necessarily indicate the development of traumatic stress (Michael et al., 2007). However, there may be a requirement to address the potential for midwives to ruminate following traumatic perinatal event experiences by employing supportive or strategies to normalise this response.

Challenging views of safety

Midwives reported an increased awareness and fear for similar events occurring at subsequent deliveries. Increased fear at subsequent deliveries was associated with a loss of confidence and an increase in defensive practice (discussed below). For midwives with high levels of distress this also extended to fears over the safety of individuals outside work, and not necessarily related to childbirth. Increased fear for safety is indicative of the alterations to worldview as a result of experiencing a traumatic perinatal event (Ehlers & Clark, 2000; Janoff-Bulman, 1989). Therefore this finding confirms theoretical predictions regarding the nature of responses to trauma.

Defensive practice

Defensive practice refers to the use of risk avoidance or risk reduction strategies to avoid litigation procedures (Symon, 2000; Surtees, 2007). Risk avoidance generally includes the

avoidance of certain procedures that are deemed 'risky' for malpractice claims afterwards (Black, 1990). Risk reduction involves conducting more tests more frequently than would be done normally, in order to detect any risk earlier on. Midwives within this study reported employing strategies of risk reduction in their subsequent practice. This involved calling for senior help more quickly, and increasing the monitoring of women on CTG's. Defensive practice of this kind is not necessarily harmful to practice, but it is believed to contribute to some implications for deliveries, for example increasing interventions (Symon, 2000). Furthermore, the development of a risk-averse care dynamic has been found to negatively impact upon the morale of midwives, who value the provision of woman centred care and advocate normal birth where possible (Lavender & Chapple, 2004).

Considering their future in midwifery

Midwives reported that their experience lead to considerations about remaining in the midwifery profession. This varied in severity, with some midwives seeking a short-term change in clinical allocation, to other midwives expressing a wish to leave the profession altogether. Findings from the postal survey (reported in section 1) reported a proportion of midwives considering leaving the profession or changing their professional allocation following traumatic perinatal event exposure. Therefore the qualitative interview findings complement this statistic by highlighting that midwives, regardless of their symptomatology, considered their future in midwifery. They also elaborate on the statistic, and identify that midwives' considerations were influenced by two sources of concern; fear of subsequent trauma (due to distress) and fear of the implication for professional disciplinary action.

The midwifery profession in the UK is under increasing pressure from rising birth rates (ONS, 2013), staff shortages (Malott et al., 2009) and a significant proportion of the midwifery workforce are within ten years of the retirement age (Royal College of Midwives, RCM, 2012). Therefore there is an important need to understand aspects of midwifery practice that could increase attrition, and findings from this study highlight traumatic perinatal event exposure as a potential influence on this. However, midwives within the survey were still practising. Further research involving midwifery exit data, investigating midwives' reasons for leaving the profession, could provide further information regarding the proportion of midwives who *actually* leave the profession following experiencing an event that they perceive to be traumatic whilst providing care to a woman.

3.3. Aspects perceived to be helpful and supportive

Being in receipt of support

Midwives were generally able to access emotional and social support from their midwifery colleagues, and particularly valued support from colleagues that were present during the event or those who had previously experienced a traumatic perinatal event. This indicates the value of experiential knowledge in feeling supported following the traumatic event. There was also evidence of midwives seeking emotional support from their partners.

However, the perception of helpful support from colleagues and partners were less prominently reported in midwives with high levels of distress. Instead, these midwives often sought professional input from an external source, which often involved the seeking of input from a counsellor. The exact nature of input received by some midwives within this group was unclear; however, most reported receiving input that was non-directive and focused on listening. NICE guidelines recommend the provision of therapist-focused cognitive behavioural therapy (TF-CBT) or eye movement desensitisation and reprocessing (EMDR) for individuals with PTS symptoms or PTSD (NICE, 2005). The provision of interventions that are not focused on trauma memories (such as relaxation or non-directive therapy) are not recommended due to a lack of evidence for their benefit in treating PTS (NICE, 2005). Midwives may have perceived a need to seek counselling following their experience, and many reported it as helpful. However, these midwives were still reporting high levels of distress, which could suggest that the efficacy of their input in ameliorating symptomatology was limited. Therefore, midwives with high distress felt a need to seek support, but did not access the nature of input that is considered appropriate for managing responses to trauma.

There was a perception reported by midwives with high and low levels of distress that support from senior colleagues or management was lacking, difficult to access, or that it had a punitive focus. Elements of this have been identified in previous research. A survey commissioned by the Royal College of Midwives investigated perceptions of support following adverse incidents (RCM, 2007). Although the majority of midwives felt supported following an adverse incident, support was predominantly accessed through midwifery colleagues rather than supervisors of midwives or managers. Supervisors of midwives theoretically provide a source of support for midwives throughout their practice, and this is especially important in relation to incidents or investigations. However, findings from the current study suggest that midwives may have unmet needs following adverse events, in relation to the perceived ability to access emotional support from supervisors or managers. As this was often attributed to exacerbate existing levels of distress, this may be an important aspect to consider for further research.

Needing to feel absolved of blame

Midwives also reported a need to feel absolved of blame following the traumatic perinatal incident. For some, this was achieved through speaking with parents and knowing that parents did not hold them accountable for what happened. Speaking with parents after an adverse event has been identified as helpful for labour and delivery nurses following an adverse perinatal incident (Beck & Gable, 2012). However, talking to parents after an adverse situation could hold sensitive implications for parents, who are likely to be experiencing their own feelings of distress. However, this finding identifies a need for midwives to counteract their feelings of self-blame following traumatic perinatal events, thus again reiterating the role of guilt in midwives' perceptions of difficulty.

3.4. Reflections over time

Qualitative investigation of midwives' experiences enabled further exploration into the way in which midwives' felt their adverse responses changed. Midwives reported experiencing some natural reduction in the severity of the impact of the event over time, which in part was influenced by subsequent positive experiences at work. Reports of a natural decline in symptomatology reflect the theoretical course of assimilation for a traumatic event (Brewin & Holmes, 2003; Ehlers & Clark, 2000). There were, however, several other reflective statements made by midwives regarding the nature of their response. Some referenced a perceived impact of working within, what they considered to be a stressful working environment. There was also reference made to strategies for managing the impact of their experience over time.

Perceived impact of organisational stressors

There was an underlying context of organisational stress perceived by midwives as contributing to their response to traumatic perinatal events. Midwives with high levels of distress cited low levels of staff and increasing demands within the workplace as factors contributing to general feelings of work-related stress. Professional factors relating to work-stress and low staff levels were proposed as contributing to the perception of an event as traumatic within the hypothetical model presented in chapter one (Figure 1.1). This was partially based on findings from the wider literature that reported feeling overextended within a job role and working within areas with low levels of staff as contributing to traumatic stress in other health professional groups (Czaja et al., 2012; Maiden et al., 2012; Austin et al., 2009; Yoder et al., 2010; Beck & Gable, 2012). Furthermore, work stressors

and low levels of perceived support, have been associated with increased risk of PTS following exposure to trauma (DiGangi et al., 2013). Therefore, reflective statements made by midwives in relation to the general context of organisational stress emphasise the perceived contribution of a stressful working environment to feelings of difficulty during adverse perinatal events.

Midwives also reported difficulty following traumatic perinatal events that was attributed to their working within a perceived 'blame culture.' Over a decade ago, Kirkham (2000) wrote about the 'culture of coping' in midwifery, where midwives felt 'scapegoated' and unsupported in their practice following adverse events. Findings from this study reiterate this, and highlight the potential for perceptions of a blame-focused environment to contribute to difficulty following traumatic perinatal events. This also suggests that midwives' responses to trauma may not be exclusively dependent on experience of the adverse event alone, but that they could be partially determined by the perceived management of the event within the working environment.

Building resilience

Midwives with low levels of distress reiterated that the experience of a traumatic perinatal event did not always infer an enduring, negative implication for their personal or professional wellbeing, and reported being able to 'carry on' in their role with minimal impact. They felt that their experience of a traumatic perinatal event provided a 'point of reference' for subsequent events, thus lessening the likelihood of an adverse response in future. Although midwives with high distress also reported a need to learn from their traumatic perinatal experience, there were no reports of feeling less distressed at subsequent adverse events. The cross sectional design used in this study prevents an inference of cause or effect between the event experience and resulting responses. It may be that the midwives with low distress were at a later stage of recovery to their high distress counterparts, and therefore were exhibiting responses indicative of having successfully processed the traumatic event memory thus alleviating any negative, enduring implication. However, it may also be that these midwives are demonstrating a process of resilience to their experience of trauma, which enabled them to process their experience without any negative implication for themselves.

Resilience is the ability to adjust to adversity without any long-term negative impact, whilst maintaining 'equilibrium' and control in one's life (Jacelon, 1997; Jackson et al., 2007; Polk, 1997). It is different to recovery, as recovery implies a hiatus in functioning, whereas

resilience implies an ability to maintain functioning whilst processing the difficult event (Jacelon, 1997). Resilience has been referred to as a process (e.g., Flach, 1988; Fine, 1991), a spectrum (e.g., Rutter 1987) and a personality trait (e.g., Wagnild & Young, 1993). Resilience has also been found to negatively correlate with symptoms of PTS (McGarry et al., 2013). Resilience can be facilitated through the provision and encouragement of social support, encouragement of the positive aspects of an adverse situation, facilitation or development of emotional intelligence, maintaining a life balance and encouraging self-reflection (Jackson et al., 2007). Several of these aspects were identified within the perceived experiences of midwives with low distress. For example, midwives with low distress tended to feel acknowledged and supported by their peers, and didn't feel the need to seek external, professional input. Therefore, it is possible that these midwives were already demonstrating an element of resilience in their responses. This finding indicates a potential for the development of resilience following traumatic perinatal events to be encouraged in a systematic way within midwifery services, in order to protect midwives from the adverse impact of subsequent traumatic perinatal events.

Furthermore, midwives reported employing a strategy of detachment in order to protect themselves from further distress at subsequent deliveries. Midwives with low levels of distress primarily reported this. Detachment such as this is a potential consequence of indirect exposure to trauma within a professional capacity (Figley, 1995) and has been reported in other health professional groups (e.g., Benoit et al., 2007; Austin et al., 2009). It was proposed as a potential implication of traumatic perinatal event exposure within the hypothetical model in chapter 1. If traumatic perinatal event exposure encourages empathic detachment from mothers, as reported within the low distress group of midwives, then there may be a requirement for further exploration of this in order to identify the extent of implications for mothers.

Acceptance and normalisation

Midwives with both high and low levels of distress reported a gradual process of accepting the potential for adverse perinatal events to occur. Within the developed world, childbirth is socially constructed as a positive, happy event. Although midwives are theoretically aware of the likelihood of adverse events occurring within childbirth, the preconception remains in terms of their own, and parents' preconceptions. Therefore, the juxtaposition between the expected 'happy' event and the actual adverse situation was a previous source of difficulty for midwives. Gaining acceptance of the inevitability of some experiences to be perceived as traumatic was perceived as helpful in managing responses and memories of the event.

Within the low distress group there was additional acknowledgement over their personal limitations as a midwife, and the likelihood of being upset following traumatic perinatal events. This suggests that midwives with low distress effectively ‘normalising’ their response to traumatic perinatal events. According to cognitive theories of PTS, appraising symptomatic responses as indications of abnormality can further exacerbate responses (Ehlers & Clark, 2000). This may help to explain why midwives in the high distress group, who did not report an acceptance over the potential to become personally upset following adverse trauma, were experiencing high symptoms of PTS.

Considering the difference in the perceived experiences of midwives with low and high distress

Investigation into the perceived experience of traumatic perinatal events in midwives with high and low levels of symptomatic response enabled further exploration into whether there were any differences in the events experienced or the perceptions that accompanied them. The profiles of events reported by either group were similar, suggesting that the content of events were no more severe for midwives with high symptoms. There were instead some underlying distinctions in the perceived experiences and responses to events between midwives in each group. Midwives with high levels of distress reported a greater degree of personalisation, whereas those with low levels of distress were more detached in their observation of the event. Midwives with high levels of distress also held a more generalised perspective about the event and its sequelae, whereas midwives with low levels of distress reported aspects that were generally more event-specific. Examples of these distinctions are discussed below.

Personalisation

There was evidence of greater personalisation in the perception of events reported by midwives with high levels of distress in comparison to those with low distress. Midwives with high levels of distress felt upset at the occurrence of the event, and found it personally upsetting to witness parents upset. They also perceived the event as a ‘personal bereavement.’ Midwives with low levels of distress acknowledged the sadness of the event and the upsetting nature of the implication for parents, but did not report feeling personally distressed or bereaved at the outcome. Therefore, this indicates a greater level of internalisation for the event and its implication in those with high distress, and a response indicative of acknowledgement and compassion for parents in midwives with low distress.

Midwives with high distress reported feeling isolated during the event, in terms of being physically alone and psychologically unsupported by other colleagues. The perception of isolation indicates an appraisal of the event that is likely to contradict reality, as midwives were unlikely to be completely alone within the event itself. Midwives with high distress also reported not feeling understood or acknowledged by senior management following the event, which contributed further to perceptions of isolation. Midwives with low distress did not report feelings of isolation within the event. Instead, these midwives acknowledged that they were not alone in their feelings of shock after the event. This is again indicative of greater personalisation within midwives with high distress. Midwives with low distress were also more likely to report feeling supported by midwifery colleagues after the event, and not feeling the need to seek additional support external to their immediate peer group.

Finally, midwives with high distress reported a perception of being personally blamed for the adverse perinatal event, and perceived their treatment to be unfair and akin to 'punishment.' Midwives with high distress felt vulnerable after the event and in response to investigative procedures, and perceived that their entire practice was under scrutiny. Although there were some reports of feeling blamed within midwives with low distress, this was not a strong theme. Also, midwives with low distress reported feeling vulnerable to investigative procedures, but this was focused on feelings of intimidation regarding the importance of the investigation rather than a perception of 'having their notes pulled.'

Cognitive models of PTSD highlight the role of memory formation and appraisals for the event and sequelae as contributing to the development of PTS responses (Ehlers & Clark, 2000). A more negative, global appraisal style has been associated with the development and maintenance of PTS responses (Dalgleish, 2004; Ehlers & Clark, 2000). Furthermore, perception of unfair treatment and blame has also been cited as an appraisal styles that can contribute to PTS (Foa et al., 1999). Midwives with high distress felt unfairly treated and 'punished' by other people following the event, and were more likely to appraise investigative procedures as an assessment of their global abilities as a midwife, rather than their practice within the specific event. Therefore, the nature of processing style reported by midwives with high, and not low, distress is concurrent with cognitive theory regarding the appraisal processes that can contribute to PTS responses.

Generalisation

There was also evidence of generalisation in the perceived impact of events reported by midwives with high levels of distress. Midwives reported concerns about safety that

extended beyond the workplace and permeated their beliefs about other people's safety unrelated to work and childbirth. Midwives with high distress also perceived that their experience impacted upon themselves, their relationships and family life. For some this was a serious impact, and was perceived to contribute to divorce from their partner. However, midwives with low distress did not perceive their traumatic perinatal event experience to have impacted upon their life outside of work. There were no reports of changes to themselves or their family lives. On the contrary, midwives with low distress reported implementing a strategy of 'not allowing' their experience to permeate beyond the event itself.

Being able to appraise a traumatic event as time-limited and without permanent implication for the future is theoretically associated with recovery from a traumatic event without the development of PTS responses (Ehlers & Clark, 2000). Furthermore, the development of PTS is associated appraisals that overgeneralise the potential for danger (Foa & Rothbaum, 1998; Ehlers & Clark, 2000). Therefore, the appraisal of the event and its impact on personal and home life reported by midwives with high distress indicate an appraisal style that is associated with the onset of PTS symptomatology. These midwives were more likely to perceive the event as having an enduring negative impact on themselves, their work and home life, whereas midwives with low distress appraised the event in a very specific way.

There were different appraisal styles and perceived implications of experiencing a traumatic perinatal event reported by midwives with both high and low events. Appraising the event in a personal way, and generalising the impact of the event to additional domains of life was reported within midwives with high levels of distress. However, midwives with low levels of distress maintained a greater psychological distance from the event. These midwives did not personalise the event, and perceived the impact of the event to be restricted to the event itself. Identification of this trajectory provides an insight and means of identifying midwives that may be at increased risk of developing PTS responses following traumatic perinatal events. It could also inform strategies to reduce the likelihood of developing PTS, by encouraging midwives to acknowledge the wider context of the event and by challenging personalised perceptions.

4. Integration of findings from the thesis

There was a high degree of homogeneity between aspects identified as contributing to events perceived as traumatic, the nature of the traumatic event itself, and the potential impact or

consequence of the experience for midwives' personal and professional wellbeing. Therefore, findings from the postal survey and the interview study can be integrated to provide an in-depth understanding of midwives' experiences, perceived responses and impacts, and potential implications of events encountered through practice that they perceived to be traumatic. These findings can be considered alongside and in development of the framework proposed in chapter one (Figure 1.1). The revised model is presented in Figure 6.1. An overview of findings from the thesis, and aspects from this model, are described below.

Antecedent factors

Several 'predisposing' factors were identified, either as predictors within the postal survey or as perceived vulnerability factors within the qualitative aspects of the thesis, relating to the context of the situation, the personal disposition of the midwives, or the general organisational context.

There were several aspects intrinsic to the midwife's personal disposition within the event, which were quantitatively associated with responses to traumatic perinatal events, or perceived by midwives within the qualitative investigations as increasing difficulty. A *limited experience in the profession* was perceived by midwives within both qualitative investigations to increase difficulty within the traumatic perinatal event situation, contributing to feeling 'out of a comfort zone.' However, this was not quantitatively associated with symptomatic responses. Additional factors relating to the midwife's personal disposition involved *being pregnant* at the time of the incident (identified within the narrative descriptions analysis), having a *personal trauma history* (identified within the quantitative analysis of the postal survey), and demonstrating a *higher level of empathy* for other people (also identified within the quantitative analysis of the postal survey).

Aspects relating to the context of the birthing episode highlight the potential for factors extrinsic to the event itself as contributing or increasing midwives' perceptions of difficulty within the situation. Midwives perceived that *having an existing relationship* with parents increased their difficulty during and after events, an aspect which was closely linked to higher empathy within the midwife-woman relationship. The *extent of prior exposure to traumatic perinatal events* was also quantitatively predictive of midwives' symptomatic responses to the event described. The organisational context also increased midwives' *difficulty in accessing resources or personnel* when required, either due to a busy working environment or the physical location of the event.

Finally, several aspects relating to the general or organisational context were also implicated as increasing difficulty for midwives. Working within the context of a stressful environment was reported by midwives within the qualitative interviews as increasing feelings of difficulty (e.g., due to a perceived lack of staff). There were also aspects described by midwives within the interviews that highlighted the social construction of childbirth as increasing difficulty, due to the positive nature of anticipation often held about childbirth, which contradicted the reality of the event they perceived as traumatic.

The traumatic perinatal event experience

There was a distinct profile to events perceived as traumatic by midwives, identified within both qualitative investigations within this thesis and reported by midwives regardless of the nature of exposure to events (witnessed or listened to an account), and the severity of their resulting symptomatic responses. Events were extremely severe, complex and occurred suddenly with little or no warning. Difficulty in controlling events, accessing resources or personnel and the general complexity of situations contributed to midwives' perceptions of 'being out of their comfort zone.' As reported within the interview study, midwives also perceived a need to control personal feelings of distress and panic in order to appear calm and professional within the event.

Potential impact and implications

There was evidence of midwives experiencing *symptoms of PTS* in response to their traumatic experience, and for some (i.e., a third of the sample) the severity of these responses was commensurate with clinical PTSD. Symptoms of PTS were aligned with more *negative worldview beliefs*, indicating presence of a cognitive component in response to traumatic perinatal events.

Midwives in the interview study reported acute feelings of *emotional upset and shock* following the event. Evidence from the postal survey and the interview study highlighted the potential for midwives to feel *guilty and blame* themselves for the event, feel *vulnerable to subsequent investigative procedures*. A period of *rumination* was also reported by midwives within the interview study, where attempts were made to 'make sense' of the event, pull together facts and place the event in perspective. A difference in appraisals made by midwives with high and low levels of distress was identified, whereby midwives with high distress had a greater propensity to personalise the implication of the experience to all

aspects of their life, and for the implications of the investigation to hold personal and generalised implications as well.

There was evidence of increased *feelings of work stress* in both the postal survey and interview studies. Midwives with symptomatic responses of PTS were significantly more likely to also report high levels of symptoms associated with burnout. A significant proportion of midwives (i.e., a third of the sample) reported seriously *considering leaving* midwifery following their experience, and some *changed their clinical allocation* (either on a short or long term basis) as a result of their experience. This was also reported within the interview study. These findings highlights the potential impact of experiences and response on midwives' professional practice and wellbeing, and is indicative of serious implications for the organisational climate.

Midwives also reported *implications for the care* they provided to mothers at subsequent births. A *loss of confidence* was attributed by midwives to an increase in *defensive practice*, and this was identified within the postal survey in addition to the interview study. Some midwives in the interview attempted to *emotionally detach* from their experiences in order to protect themselves. This holds implications for the nature of care provided to mothers, as the mother's perception of her birth can be determined by the perceived nature of care they receive from their midwife (Elmir et al., 2011).

Development of the hypothetical framework

Using findings from the thesis, midwives' perception of an event as traumatic can be influenced by aspects relating to the midwife's personal disposition, the context of the birthing situation and the overall organisational climate. The traumatic perinatal event can sometimes elicit a symptomatic response of PTS, which is also aligned with the development of more negative worldview beliefs. These symptomatic responses contribute to increased levels of burnout, and held implications for midwives' professional wellbeing. Figure 6.1 presents the developed hypothetical framework from chapter 1 (Figure 1.1). It must be noted that this model is only representative of aspects identified through the literature review and investigated within this thesis; and does not account for additional aspects that are also likely to influence the development of traumatic stress responses. For example, aspects such as the nature of appraisals formed after the event and also likely to be implicated in the development of symptomatic responses, and will require further investigation.

However, by integrating findings from the thesis with the predictions made within chapter 1, a hypothetical cycle can be proposed regarding the impact of midwives' experiencing an event whilst caring for mothers as traumatic, and the implications this may hold for subsequent experience. These relate to the potential implications of midwives' experiencing a responding to events they perceive as traumatic on the *nature of care that is provided to mothers*, and the potential implications of raised burnout for levels of *attrition and absenteeism in the midwifery profession*. A perceived impact of traumatic perinatal event experience and response was for midwives to 'emotionally detach' from difficult situations, in order to prevent themselves from becoming upset. There was also a perceived increase in defensive practice, as midwives felt less confident in their practice and were more fearful of investigative procedures. A contextual aspect that influenced midwives' perceived difficulty within the traumatic perinatal event related to a busy working environment. Experiences of traumatic perinatal events was associated with midwives' considering leaving the profession and changing allocation. Symptomatic responses of PTS were also associated with increased symptoms of burnout. The increased level of burnout could hold implications for a higher level of absenteeism and turnover within the midwifery profession, which in turn could feed back into the busy organisational context as, for example, staff numbers become lower.

The two hypothetical implications of midwives experiencing and responding to events they perceive as traumatic are presented as hypothetical implications only (highlighted with dotted lines), as they were not assessed within the thesis. The model is based upon finding from the thesis that is based upon cross sectional research only, and will require further testing using a prospective design. However, it demonstrates both the importance of acknowledging the potential implication for midwives experience some events whilst providing care to mothers as traumatic, and highlights aspects for consideration in subsequent research. There is a growing interest in maternity workers' experiences of difficult events during the perinatal period (e.g., Beck, 2013; Beck & Gable, 2012, 2013); however, further, systematic empirical research is required.

Figure 6.1 A revised hypothetical model of aspects identified as implicated in midwives' experiences of, responses to and potential implications of traumatic perinatal event exposure within this thesis

5. Implications

Theoretical Implications

Findings from this thesis indicate that consideration of VT as a framework for understanding midwives' experiences was not appropriate, as midwives primarily both witnessed and listened to their experiences of trauma. Therefore consideration of PTS frameworks, for both the nature of exposure and response, is recommended for subsequent research with a midwifery sample. However, aspects often implicated in the prediction of PTSD in the general trauma literature (e.g., personal trauma history) held only limited utility in the statistical prediction of responses within this sample. This suggests that efforts to identify midwives most vulnerable to traumatic stress responses may benefit from consideration of other factors, for example relating to their satisfaction in their professional role.

Clinical Implications

Using the sampling strategy and response rate obtained for the postal survey, a conservative estimate can be made about the proportion of midwives likely to experience PTS symptomatology following exposure to perinatal events they perceive to be traumatic. If an assumption is made that the midwives not returning the questionnaires represent midwives that are non-symptomatic (85%), and that the 15% returning the questionnaire are representative of midwives experiencing difficulty following exposure to traumatic perinatal events, then symptomatic prevalence reported within this sample can be conservatively extrapolated to the general midwifery profession. Using this, it can be inferred that there is a potential for at least one in six midwives to experience traumatic perinatal events, and that one in twenty could experience PTS symptoms in response. For example, the most recent available data indicates that there are 25,654 midwives registered to practice within England (HSCIC, 2013). Findings from this postal survey indicate that over four thousand midwives ($n=4104$) could experience traumatic perinatal events through providing care to women, and nearly twelve hundred ($n=1282$) could be experiencing PTS responses. Furthermore, this inference is likely to underestimate the true proportion of midwives' with PTS symptomatology, as some midwives with PTS symptoms may have avoided completing the survey due to the level of distress that this could have caused.

There was evidence to suggest that exposure to traumatic perinatal events could influence midwives' intentions for remaining within the midwifery profession. Over a third of the

sample ($n= 148$) had seriously considered leaving the profession following a traumatic perinatal incident. Considerations over leaving the profession were associated with the severity of PTS symptomatology reported. A shortage of qualified midwives (RCM, 2011, 2012), rising birth rates (ONS, 2013) and a high proportion of the midwifery workforce within ten years of retirement age (RCM, 2012) highlight a need to maintain retention of trained midwives within the profession. Furthermore, there is a trend throughout the UK, especially within England and Northern Ireland, for an ageing profile of mothers (RCM, 2011, 2012; ONS, 2013). Older mothers are more likely to experience complications and complex pregnancies, which further increases the pressure on maternity services (RCM, 2012). Findings from this study highlight a potential increase in attrition for midwives from the profession following traumatic perinatal event exposure. Whilst findings are derived from a study of midwives who are still *in* the profession, this suggests a need to acknowledge the impact this can have for midwives and their consideration to remain within the profession.

Findings from the qualitative interviews indicate that there is a lack of awareness and acknowledgement about the impact that adverse perinatal events can have on midwives. Some midwives, especially those with high levels of resulting distress, felt there was no emotional support for midwives, and that there was a greater focus instead on investigative procedures. Therefore, acknowledgement of the impact of traumatic perinatal events for midwives, and the provision of emotional support and understanding, could benefit those midwives most vulnerable to developing PTS responses.

Evidence from the postal survey suggested that midwives with greater levels of empathy reported greater PTS symptomatology. Posttraumatic stress and particularly avoidant symptomatology were also predictive of emotional exhaustion and the depersonalisation of recipients of care. Therefore, midwives who are more empathic may be more vulnerable to developing PTS following traumatic perinatal events. This in turn may increase vulnerability to exhaustion and more likely to employ a strategy of depersonalisation towards women in their care. Empathy is an important feature of maternity care, and it is highly valued by midwives (Thomas, 2006). However, findings from both qualitative investigations reported that, for some midwives, building a relationship with women and witnessing women and their partners' upset influenced perception of an event as traumatic. There is a need to acknowledge the potential for empathy to inadvertently increase vulnerability to adverse responses, and findings indicate that building relationships with women and their partners may represent a catalyst within this response.

Contemporary issues in maternity care

Traumatic perinatal event exposure was operationalized using an adapted criterion from the DSM-IV-TR (APA, 2000). Therefore, midwives within this sample reported perceiving an event to be traumatic that corresponds to (what is considered to be) a traumatic event across multiple domains. However, experiencing an event occurring during childbirth is inherently unique to other types of trauma. Within the developed world childbirth is socially conceptualised as a positive occurrence (Ayers et al., 2008; Mander, 2001). There is an expectation around childbirth that the delivery will run smoothly and result in a 'perfect' outcome (Surtees, 2010). Therefore, childbirth is less socially acknowledged as an event that could potentially involve aspects that could be perceived as traumatic.

Similar to the public perception of childbirth, midwifery is generally not considered to be a profession where exposure to trauma is expected. Midwives are considered lead professionals and experts in the provision of care around low-risk, 'normal,' childbirth (DOH, 2010; NMC, 2009). When compared to other health professions, such as ambulance workers or doctors, there is a lesser expectation and acknowledgement for midwives to sometimes experience aspects of their practice as traumatic. Awareness of these expectations held by parents and society in general contributed to two sources of difficulty for midwives. Firstly, midwives' experienced feelings of guilt and responsibility when they were unable to provide parents with a positive outcome following an unexpected adverse situation. Secondly, midwives were experiencing trauma in a way that is not supported by the social construction of midwifery as a profession.

Serious adverse events during childbirth within the developed world *are* relatively rare, and therefore the frequency of potential exposure to traumatic events is likely to be much lower within a midwifery sample than, for example, within a sample of ambulance workers or emergency workers (e.g., Burtson & Stichler, 2010). The social construction of childbirth means that midwives also provide care to mothers within a context of positive anticipation. A rapport with a woman is developed, often prior to the event occurring. This is inherently unique to other health professional groups, for example ambulance workers, who often meet their recipient of care for the first time at the scene of an adverse event (or shortly afterwards), and are attending to recipients of care within a context that is defined by an emergency (and adverse) situation. Therefore, the very nature of traumatic perinatal event occurrence, frequency and context mean that midwives' experiences of trauma are unique to any others within other health professional groups.

The revised conceptualisation of PTSD within the DSM-V

The diagnostic criterion for PTSD was recently amended for the publication of the DSM-V (APA, 2013). These changes encompass two implications for the findings of this study. Firstly, an additional symptom cluster for ‘altered cognition and mood’ was introduced (Criterion D). This includes aspects such as the development of negative worldview, beliefs, and enduring state of “fear, horror, anger, guilt or shame” (p. 272) beginning or worsening after traumatic event exposure. This reiterates the potential for direct and indirect trauma exposure to elicit cognitive disruption in addition to the emotional and behavioural symptoms previously associated with PTS. Findings from the quantitative aspect of the postal survey within this thesis compliment this amendment, as PTS symptoms were aligned with the negativity of worldview beliefs reported by midwives. Therefore, this strengthens further the rationale for considering midwives’ responses within a PTS framework with cognitions aligned, rather than with VT as an additional dimension.

Secondly, criterion A2, the requirement for appraisal of a traumatic event with ‘fear, helplessness or horror,’ was removed due to a lack of diagnostic accuracy (Friedman et al., 2010). This poses a potential issue in the subsequent investigation of PTS in health or medical professionals. Some events experienced by health or medical professionals are likely to involve a level of risk for the recipient of care, and this includes some complications occurring within labour and birth. The previous appraisal criterion (APA, 2000) provided a method of disaggregating between incidents involving risk, and incidents that involved risk and were perceived as traumatic by the professional that indirectly experienced it. The use of an appraisal criterion may require consideration when investigating response to indirect trauma in health professionals as some events within childbirth could be considered to include an element of risk for the mother or child (albeit rarely), but this will not necessarily mean that the event induces a perception of trauma within the midwife.

Directions for future research

This research was primarily concerned with identifying aspects associated with increased risk of developing PTS symptomatology following a traumatic perinatal event. Analyses indicated a significant, yet limited, predictive association between personal and work-related factors and posttraumatic stress symptomatology. Further research is required to investigate additional aspects that may hold greater magnitude in predicting PTS responses; for example, aspects relating to satisfaction within the occupational role. There is also a

requirement for research to investigate protective factors, such as those influencing resilience or posttraumatic growth. By understanding protective factors in addition to aspects influencing vulnerability, approaches to prevent the development of PTS symptoms following traumatic perinatal events can be informed.

Further research is required to systematically investigate ways of preparing midwives for the potential to experience trauma, and preventing the development of adverse responses in those that require it. This could entail, for example, the provision of psychoeducation to improve midwives' knowledge and understanding of trauma and trauma responses, thereby reducing the experience of trauma for midwives and ameliorating any adverse impacts. In addition to this, there is a need to identify methods of preventing the development of traumatic stress symptoms by implementing strategies aimed at encouraging adaptive coping following a traumatic perinatal event, and by facilitating access to appropriate psychological input for those with clinical levels of symptomatology. Approaches of this kind will require investigation to assess their efficacy, acceptability and suitability for efficient implementation within existing maternity services.

6. Recommendations

Increasing awareness

- Midwifery services should be aware that a significant proportion of their midwives are experiencing symptoms of posttraumatic stress at levels indicative of clinical relevance following exposure to events experienced in their work role that they have experienced as traumatic. Findings suggest that this accounts for at least five percent of the midwifery workforce. This is a conservative estimate, and likely to underestimate the real proportion of midwives affected in this way following traumatic perinatal event experiences.
- Services also need to be aware that a significant proportion of midwives seriously considered leaving the profession following a traumatic perinatal experience, and that this was significantly more likely within midwives experiencing high levels of posttraumatic stress symptoms. Whilst this study is limited in the sample used (i.e., all midwives were still working within the midwifery profession), it is highly likely that such experiences could contribute to attrition from the workforce. Therefore, awareness at the level of midwifery managers is required in order to promote the identification of midwives experiencing difficulty following a traumatic perinatal event experience, and to facilitate access to appropriate support where this is required.

Preparation

- Midwives need to be provided with clear information about the potential to experience events within their work role as traumatic, and the nature of associated symptomatic responses. Increasing understanding about the nature of symptomatic responses can ‘normalise’ the experience of symptoms (i.e., prevent the development of negative appraisals) and subsequently reduce distress should they occur (Wessley et al., 2008). Preparation such as this can facilitate self-awareness about the potential for responses to occur, and when additional support may be required. This should be implemented at a pre-registration level and a post-registration level, to enhance awareness in midwives about an aspect of practice that holds implications for personal and professional wellbeing both prior to and after qualification.
 - Midwifery educators should integrate information regarding the potential for traumatic perinatal event exposure and responses into existing pre-registration midwifery education. Current guidelines for the education and training of midwives advocate the ability to detect and manage complications or adverse situations, and confidence in applying emergency protocol when required (NMC, 2009). There is no specific guidance or requirement for midwives to be aware of the potential for traumatic perinatal events to impact upon them. Therefore future curricula needs to incorporate the opportunity for pre-registration midwifery students to have access to information about the nature of, and potential for, traumatic stress responses.
 - Organisations that provide post-registration education for midwives should incorporate information about the potential to experience some events encountered as traumatic, and the nature of potential response. At this level information can be integrated within professional development and lifelong learning events, which midwives undertake in order to maintain their PREP requirements standards of registration (NMC, 2011)
 - Midwifery managers should also be aware of the added value of skills drills. Skills drills are currently advocated as a method for training and assessing the function of systems and procedures within emergency situations (e.g., cord prolapse, vaginal breech delivery, shoulder dystocia, antepartum/postpartum haemorrhage and eclampsia), and are currently conducted at both pre-registration and postgraduate level (NMC, 2009; NMC, 2011). Findings indicate that skills drills provide an additional source of support for midwives when

encountering traumatic perinatal events, as the facilitation of procedural learning increased midwives' confidence in the provision of care during unexpected and highly severe situations.

Support and the provision of psychological input

- Maternity managers and supervisors of midwives, as part of their duty of care, should introduce a system facilitating awareness of trauma related responses, and to signpost midwives to accessible sources of psychologically based input with good knowledge of the maternity context.
 - Midwifery managers and supervisors of midwives need to be aware that a midwife may feel personally traumatised by events experienced as part of their midwifery role and to be sensitive to this throughout necessary investigative procedures. Recognition of excessive perceptions of self-blame or ruminative thought processing could suggest some psychological difficulty following an event, thus indicating the requirement for additional support.
 - An emotionally supportive approach towards midwives should be adopted in addition to the provision of informational support. Maternity managers and supervisors of midwives should, where possible, emphasise and acknowledge midwives' positive aspects of practice within an event that could be perceived as traumatic.
 - Midwives reporting symptoms of posttraumatic stress should not be referred to counselling or another source of non-directive therapy. Such referral is in contradiction of NICE (2005) guidelines for the management of post-trauma responses, and there is insufficient evidence to suggest that counselling will effectively reduce response to trauma.
 - Midwives should instead have self-referral access to specific psychological expertise centred on managing trauma-related responses. These will need to be provided by staff who are also knowledgeable about the maternity context, with a confidential and non-stigmatising approach. The provision of such will require evaluation though the implementation of an audit, and outcome measures such as staff absenteeism or attrition from the workforce would provide a useful basis on which to base this.
- Midwives need to be aware about the potential for their colleagues to experience an event at work as traumatic. The importance of peer support between midwives and their colleagues should not be underestimated. This particularly relates to the sharing of prior experiences, and the informal discussion of events within colleagues.

7. Strengths and limitations

This study was, to the best of available knowledge, the first to investigate midwives' experiences of traumatic perinatal events in the United Kingdom on a large-scale basis. The large sample size ($n= 421$) for the postal survey provided ample power on which to conduct statistical tests. Furthermore, the relatively large number of midwives interviewed ($n= 30$) provided a rich insight into the perceived experience of traumatic perinatal events from the perspective of midwives with high and low resulting levels of distress. However, the sample of midwives within this thesis represented only 16% of the 2800 midwives originally invited to take part. Whilst this was anticipated given the postal survey design and sensitive nature of the research content, conclusions must be considered in line with the selective nature of this sample.

The use of a mixture of quantitative and qualitative research designs to investigate the experience of trauma provided a number of benefits. Quantitative exploration into symptomatic structure and prevalence provided an indication into the nature of symptomatic responses experienced by midwives following traumatic perinatal events. There are limitations however in the use of factor analysis to investigate the symptom structure, as it would be plausible to expect scores to load onto their respective scales. Despite this, there was no clear indication of cross loading for symptoms within the analysis, indicating that an alternative symptom structure need not be considered within this sample.

The qualitative aspect of the postal survey enabled a large-scale investigation into the characteristics of events perceived as traumatic by midwives. The qualitative research study enabled a smaller, more detailed, investigation into the process of experiencing, responding to and managing the impact of traumatic perinatal events. This both confirmed and extended findings from the postal survey, and provided a deeper understanding into the nature of experiences for midwives with both high and low levels of resulting distress. Findings from each study were concurrent with each other and both confirmed and extended the hypothetical model proposed in chapter 1. Therefore the use of triangulation provided a coherent exploration into the experience, perception and impact (both perceived and symptomatic) of traumatic perinatal event exposure in midwives from both quantitative and qualitative levels of explanation.

Measurement of PTS, burnout, perceived impairment and empathy was conducted using standardised scales that all held good or excellent construct validity for investigating the

respective responses. However, self-report measures can be subject to demand characteristics, whereby participants answer in ways that they feel they 'should,' rather than in ways that they actually feel. The survey was designed in order to enable midwives to take part anonymously, unless they wished to be contacted about taking part in the subsequent interview study. Therefore, any apprehension about reporting aspects or impacts from their experiences that were of a sensitive nature are likely to have been minimised; however, it is likely that some difficulty still remained. This may be particularly applicable in the measurement of depersonalisation of women in receipt of their care and may have contributed to the relatively low level reported within this sample.

Evidence of PTS symptomatology at levels indicative of clinical relevance was inferred using a cut off value, applied to the total score on the respective measure (IES-R). Whilst this has been reported in previous studies to effectively identify potentially clinically levels of PTS (Rash et al., 2008), the dichotomous nature of a cut off inevitably discards participants with high levels of symptoms that fall short of this value. This method was useful in providing an indication of the proportion of midwives reporting clinically relevant levels of PTS symptomatology; however, there is a need to consider the full spectrum of PTS responses and those midwives reporting 'sub clinical' levels of symptoms. Midwives with subclinical symptomatology may also require additional support or input. Furthermore, subsequent research could strengthen findings from this thesis by implementing semi-structured interview techniques specifically designed to assess PTS.

The sampling strategy used within the study recruited midwives who were qualified and registered with the Royal College of Midwives. Midwives within this sample were mainly engaged in clinical practice, and a smaller percentage were involved in educative or research roles. Due to this however, midwives who had left the profession were not represented within this sample. It is likely therefore that this sample is biased towards midwives with traumatic perinatal event experiences, but who have remained within the profession. As noted within the discussion, investigation into the role of professional experience predicting PTS symptomatology, and intention to leave the profession, may be underrepresented within this sample. Further research with midwives who have left the profession could provide a greater insight and would strengthen conclusions drawn about the impact and prediction of responding to traumatic perinatal events.

Finally, the cross sectional design of the project poses an additional limitation on inferences made within this thesis. A cross-sectional design was suitable for a project that was largely

explorative, and enabled the efficient collection of a rich dataset. However, this type of design prevents any inference of cause (i.e., traumatic perinatal event experience) and effect (i.e., PTS symptomatology, worldview beliefs, burnout). At best, it can be inferred that responses were perceived (by midwives) to occur following experiencing an event they perceived as traumatic. Furthermore, cross sectional research cannot control for any additional individual differences or variables that may inadvertently influence the nature of response to traumatic perinatal events. As indicated by the variety of responses and perceived impacts reported by midwives, the experience of traumatic perinatal events is complex. In order to establish causal relationships, prospective and longitudinal research designs are essential.

8. Conclusions

Integrating findings from the three studies provides an in-depth overview of midwives experiences of traumatic perinatal events; relating to the nature of their experience, prevalence and prediction of their responses to these, the implication of these experiences and aspects that are perceived as helpful or supportive for managing or lessening any impact.

Midwives' experiences of traumatic perinatal events

- Midwives experience some events they encounter in their work role as traumatic
- There was a distinct profile of events perceived as traumatic by midwives, regardless of the level of symptomatic response. Events were perceived as unpredictable, highly severe and complex, and difficult to control. Midwives reported feeling 'out of their comfort zone,' and some felt that they had to manage their feelings during the event in order to remain calm and appear professional. Several contextual factors, relating to midwives' relationships with parents, the organisational context and their own personal experiences also influenced perception of an event as traumatic

The nature of response to traumatic perinatal events

- The nature of exposure and response to traumatic perinatal events corresponded to existing conceptualisations of traumatic stress responses. Responses were best considered within a PTS response framework expanded to incorporate negative worldview beliefs as an existing, aligned dimension, rather than a separate VT framework
- A significant subsample of midwives were currently experiencing clinically relevant symptoms of posttraumatic stress

- Midwives with higher levels of posttraumatic stress symptomatology were more likely to hold negative beliefs about themselves, the world and other people
- There was a tendency for midwives to feel guilty and perceive themselves to blame for an otherwise ambiguous event. Midwives ruminated over the cause of events in an attempt to ascertain how and why the events occurred, and were less confident in their practice as a result
- Differing appraisal styles between midwives with high and low levels of distress corresponded to theories about the role of cognitive appraisals formed during traumatic events that contribute to the development of PTS symptoms, and reflect the different severity of symptoms reported within either group
 - Midwives with experience of trauma and high distress were more like to personalise aspects of the traumatic perinatal experience and its sequelae. For example, they were more likely to feel isolated during the event, either physically or psychologically, and feel personally upset and bereaved by the event. They were also more likely to generalise the implications of their experience, perceiving their entire practice to be under scrutiny and all aspects of their personal and professional lives to be negatively affected
 - Midwives with low levels of distress held a greater personal distance from the event and were not personally upset by their experience. They felt shocked after the event, but recognised that they were not alone in feeling this way. Furthermore, midwives with low distress did not generalise the implication of the event; feelings of vulnerability were specifically related to answering questions about the event, and it was recognised that investigative procedures were not to apportion blame

Predictors of traumatic stress responses

- A higher number of previous traumatic event experiences, and a greater degree of exposure to these (i.e., witnessing *and* listening to accounts) increase the risk of developing higher symptoms of posttraumatic stress symptomatology
- Midwives with greater empathy and with a personal trauma history (unrelated to childbirth) are also at greater risk of developing PTS symptomatology following experiencing a traumatic perinatal event. A personal experience of traumatic childbirth did not increase vulnerability to PTS responses
- The number of years qualified as a midwife did not statistically increase vulnerability to PTS symptomatology, however qualitative investigation identified that midwives perceived themselves to be more vulnerable to distress when they had limited

professional experience (i.e., newly qualified). The nature of this association may not be linear, and may only increase vulnerability when at a certain level

Implications of traumatic stress experiences and responses

- Implications of traumatic events were complex and multidimensional with positive and negative aspects perceived. Beneficial effects included a perceived improvement to confidence, and being able to learn from the experience, reflect upon and improve practice. Adverse effects included a loss of confidence, the distressing nature of responses and feeling vulnerable to investigative procedures
- The impact of traumatic perinatal events permeated midwives' personal and professional lives, illustrated by similar levels of perceived impairment in work, home and social domains of life. The extent of perceived impairment to these domains was highly and significantly associated with PTS symptomatology and more negative worldview beliefs
- Symptoms of PTS are predictive of responses associated with increased burnout; namely increased emotional exhaustion and greater depersonalisation, but were not associated with perceptions of personal accomplishment
- A significant proportion of midwives seriously considered leaving the midwifery profession after experiencing a traumatic perinatal event, regardless of the level of their symptomatic response. Midwives with higher levels of PTS were significantly more likely to have considered leaving the profession following a traumatic perinatal experience

What helped midwives following traumatic perinatal events

- Midwives reported building a resilience to traumatic perinatal events and detaching from the emotional aspects of care in order to cope
- Gaining acceptance over the inevitability of traumatic events occurring whilst caring for women helped midwives accept the limitations on their ability to control subsequent situations
- The majority of midwives were able to access support from their midwifery colleagues and partners. There was a general perception that support from supervisors or senior managers did not attend to their emotional needs, and that some felt input from these colleagues to be punitive
- Receiving positive feedback on their practice from senior colleagues during the event, and feeling that their personal feelings were acknowledged by midwifery managers and supervisors of midwives lessened the perceived negative impact of the event

Findings confirm and develop the hypothetical testable model proposed within chapter one, identifying aspects contributing to the perception of an event as traumatic, the potential response to traumatic perinatal events, and the implication that experiences and responses can have. This model can be used to inform prospective, longitudinal research assessing effective ways of identifying midwives vulnerable to traumatic stress, and to further establish the nature of impact on the overall organisation climate or the nature of care provided to women.

REFERENCES

- Abendroth, M., & Flannery, J. (2006). Predicting the risk of compassion fatigue: A study of hospice nurses. *Journal of Hospice and Palliative Nursing*, 8(6), 346-356.
- Ackerley, G. D., Burnell, J., Holder, D. C., & Kurdek, L. A. (1988). Burnout among licensed psychologists. *Professional Psychology-Research and Practice*, 19(6), 624-631. doi: 10.1037/0735-7028.19.6.624
- Adams, S. A., & Riggs, S. A. (2008). An Exploratory Study of Vicarious Trauma Among Therapist Trainees. *Training and Education in Professional Psychology*, 2(1), 26-34. doi: 10.1037/1931-3918.2.1.26
- Alcorn, K. L., O'Donovan, A., Patrick, J. C., Creedy, D., & Devilly, G. J. (2010). A prospective longitudinal study of the prevalence of post-traumatic stress disorder resulting from childbirth events. *Psychological Medicine*, 40(11), 1849-1859. doi: 10.1017/s0033291709992224
- Alexander, D. A., & Klein, S. (2001). Ambulance personnel and critical incidents - Impact of accident and emergency work on mental health and emotional well-being. *British Journal of Psychiatry*, 178, 76-81. doi: 10.1192/bjp.178.1.76
- American Psychological Association. (1980). *Diagnostic and Statistical Manual of Mental Disorders* (III) Washington DC: American Psychiatric Association.
- American Psychological Association. (2000). *Diagnostic and Statistical Manual of Mental Disorders* (IV-TR). Washington DC: American Psychiatric Association.
- American Psychological Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (V). Washington DC: American Psychiatric Association.
- Arbuckle, R., Frye, M. A., Brecher, M., Paulsson, B., Rajagopalan, K., Palmer, S., & Innocenti, A. D. (2009). The psychometric validation of the Sheehan Disability Scale (SDS) in patients with bipolar disorder. *Psychiatry Research*, 165(1-2), 163-174. doi: 10.1016/j.psychres.2007.11.018

- Austin, W., Goble, E., Leier, B., & Byrne, P. (2009). Compassion Fatigue: The Experience of Nurses. *Ethics and Social Welfare*, 3(2), 195-214.
doi:10.1080/17496530902951988
- Ayers, S., Joseph, S., McKenzie-McHarg, K., Slade, P., & Wijma, K. (2008). Post-traumatic stress disorder following childbirth: Current issues and recommendations for future research. *Journal of Psychosomatic Obstetrics and Gynecology*, 29(4), 240- 250.
doi:10.1080/01674820802034631
- Ayers, S., & Pickering, A. D. (2001). Do women get posttraumatic stress disorder as a result of childbirth? A prospective study of incidence. *Birth-Issues in Perinatal Care*, 28(2), 111-118. doi: 10.1046/j.1523-536X.2001.00111.x
- Baird, S., & Jenkins, S. R. (2003). Vicarious traumatization, secondary traumatic stress, and burnout in sexual assault and domestic violence agency staff. *Violence and victims*, 18(1), 71-86. doi: 10.1891/vivi.2003.18.1.71
- Bakker, R. H. C., Groenewegen, P. P., Jabaaij, L., Meijer, W., Sixma, H., & deVeer, A. (1996). 'Burnout' among Dutch midwives. *Midwifery*, 12(4), 174-181. doi: 10.1016/s0266-6138(96)80004-0
- Baron-Cohen, S., & Wheelwright, S. (2004). The empathy quotient: An investigation of adults with Asperger syndrome or high functioning autism, and normal sex differences. *Journal of Autism and Developmental Disorders*, 34(2), 163-175. doi: 10.1023/b:jadd.0000022607.19833.00
- Beavan, V., & Stephens, C. (1999). The characteristics of traumatic events experienced by nurses on the accident and emergency ward. *Nursing praxis in New Zealand*, 14(1), 12-21.
- Beck, C. T. (2004). Birth trauma: In the eye of the beholder. *Nursing Research*, 53(1), 28-35.
- Beck, C. T. (2013). The obstetric nightmare of shoulder dystocia: A tale from two perspectives. *Mcn-the American Journal of Maternal-Child Nursing*, 38(1), 34-40.
doi: 10.1097/NMC.0b013e3182623e71
- Beck, C. T., & Gable, R. K. (2013). Another Scar to My Soul: Secondary Traumatic Stress in Labor and Delivery Nurses. *Nursing Research*, 62(2), E5-E5.
- Beck, C. T., Gable, R. K. (2012). A mixed methods study of secondary traumatic stress in labour and delivery ward nurses. *Journal of Obstetric Gynecological Neonatal Nursing*, 41(6), 747- 760. doi: 10.1111/j.1552-6909.2012.01386.x
- Ben-Porat, A., & Itzhaky, H. (2009). Implications of Treating Family Violence for the Therapist: Secondary Traumatization, Vicarious Traumatization, and Growth. *Journal of Family Violence*, 24(7), 507-515. doi: 10.1007/s10896-009-9249-0

- Birch, L. (2001). Stress in midwifery practice: an empirical study. *British Journal of Midwifery*, 9(12), 730-734.
- Benoit, L. G., Veach, P. M., & LeRoy, B. S. (2007). When you care enough to do your very best: genetic counselor experiences of compassion fatigue. *Journal of genetic counseling*, 16(3), 299-312. doi: 10.1007/s10897-006-9072-1
- Black, N. (1990). Medical litigation and the quality of care. *Lancet*, 335(8680), 35-37. doi: 10.1016/0140-6736(90)90151-t
- Bowling, A. (2009). *Research methods in health: Investigating health and health services* (3rd ed.). Maidenhead: McGraw-Hill University Press.
- Brady, J. L., Guy, J. D., Poelstra, P. L., & Brokaw, B. F. (1999). Vicarious traumatization, spirituality, and the treatment of sexual abuse survivors: A national survey of women psychotherapists. *Professional Psychology-Research and Practice*, 30(4), 386-393. doi: 10.1037//0735-7028.30.4.386
- Braun, V., & Clark, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77- 101.
- Brewin, C. R., & Smart, L. (2005). Working memory capacity and suppression of intrusive thoughts. *Journal of Behaviour Therapy and Experimental Psychiatry*, 36, 61- 68.
- Briere, J. (1997). *Psychological assessment of adult posttraumatic states*. Washington D.C.: American Psychological Association.
- Breslau, N. (2009). The epidemiology of trauma, PTSD, and other posttrauma disorders. *Trauma Violence & Abuse*, 10(3), 198-210. doi: 10.1177/1524838009334448
- Breslau, N., Troost, J. P., Bohnert, K., & Luo, Z. (2013). Influence of predispositions on post-traumatic stress disorder: does it vary by trauma severity? *Psychological Medicine*, 43(2), 381-390. doi: 10.1017/s0033291712001195
- Brewin, C. R., Dalgleish, T., & Joseph, S. (1996). A dual representation theory of posttraumatic stress disorder. *Psychological Review*, 103(4), 670-686. doi: 10.1037//0033-295x.103.4.670
- Brewin, C. R., & Holmes, E. A. (2003). Psychological theories of posttraumatic stress disorder. *Clinical Psychology Review*, 23(3), 339-376. doi: 10.1016/s0272-7358(03)00033-3
- Bride, B. E., Robinson, M. M., Yegidis, B., & Figley, C. R. (2004). Development and validation of the secondary traumatic stress scale. *Research on Social Work Practice*, 14(1), 27-35. doi: 10.1177/1049731503254106
- Briere, J. (1997). *Psychological assessment of child abuse effects in adults*.

- Burtson, P. L., & Stichler, J. F. (2010). Nursing work environment and nurse caring: relationship among motivational factors. *Journal of Advanced Nursing*, 66(8), 1819-1831. doi: 10.1111/j.1365-2648.2010.05336.x
- Carmel, M. J. S., & Friedlander, M. L. (2009). The relation of secondary traumatization to therapists' perceptions of the working alliance with clients who commit sexual abuse. *Journal of Counseling Psychology*, 56(3), 461-467. doi: 10.1037/a0015422
- Chan, A. O. M., & Huak, C. Y. (2004). Influence of work environment on emotional health in a health care setting. *Occupational Medicine-Oxford*, 54(3), 207-212. doi: 10.1093/occmed/kqh062
- Chemtob, C. M., Hamada, R. S., Bauer, G., Kinney, B., & Torigoe, R. Y. (1988). Patients suicides - frequency and impact on psychiatrists. *American Journal of Psychiatry*, 145(2), 224-228.
- Circenis, K., Deklava, L., & Millere, I. (2009). Burnout and compassion fatigue among Latvian nurses. *Psychology & Health*, 24, 132-133.
- Clohessy, S., & Ehlers, A. (1999). PTSD symptoms, response to intrusive memories and coping in ambulance service workers. *British Journal of Clinical Psychology*, 38, 251-265. doi: 10.1348/014466599162836
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Erlbaum.
- Cooper, H. (1998). *Synthesizing research: A guide for literature reviews* (2nd ed.). California, USA: Sage Publications.
- Crabtree, B. F., & Miller, W. L. (1999). *Doing Qualitative Research*. London, England: Sage.
- Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed.). London, UK: Sage.
- Czaja AS, M. M., Mealer M. (2012). Symptoms of posttraumatic stress disorder among pediatric acute care nurses. *J Pediatr Nurs.*, 27(4), 357-365.
- Czaja, A. S., Moss, M., & Mealer, M. (2012). Symptoms of Posttraumatic Stress Disorder Among Pediatric Acute Care Nurses. *Journal of Pediatric Nursing-Nursing Care of Children & Families*, 27(4), 357-365. doi: 10.1016/j.pedn.2011.04.024
- Czarnocka, J., & Slade, P. (2000). Prevalence and predictors of post-traumatic stress symptoms following childbirth. *British Journal of Clinical Psychology*, 39, 35-51. doi: 10.1348/014466500163095
- Dalglish, T. (2004). Cognitive approaches to posttraumatic stress disorder: The evolution of multirepresentational theorizing. *Psychological Bulletin*, 130(2), 228-260. doi: 10.1037/0033-2909.130.2.228

- Davis, M.H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology*, 10, 85- 104.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113-126.
- Dekel, S., Peleg, T. & Solomon, Z. (2013). The relationship of PTSD to negative cognitions: A 17-year longitudinal study. *Psychiatry*, 76(3), 241- 255. doi: 10.1521/psyc.2013.76.3.241
- DiGangi, J. A., Gomez, D., Mendoza, L., Jason, L. A., Keys, C. B., & Koenen, K. (2013). Pretrauma risk factors for posttraumatic stress disorder: A systematic review of the literature. *Clinical Psychology Review*, 33, 728- 744. doi: 10.1016/j.cpr.2013.05.002
- Department of Health. (2010). *Midwifery 2020: Delivering expectations*. London: Department of Health.
- Dominguez-Gomez, E., & Rutledge, D. N. (2009). Prevalence of secondary traumatic stress among emergency nurses. *Journal of Emergency Nursing*, 35(3), 199-204. doi: 10.1016/j.jen.2008.05.003
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder. *Behaviour Research and Therapy*, 38(4), 319-345. doi: 10.1016/s0005-7967(99)00123-0
- Ehlers, A., Mayou, R. A., & Bryant, B. (1998). Psychological predictors of chronic posttraumatic stress disorder after motor vehicle accidents. *Journal of Abnormal Psychology*, 107(3), 508-519. doi: 10.1037//0021-843x.107.3.508
- Ehring, T., Frank, S., & Ehlers, A. (2008). The role of rumination and reduced concreteness in the maintenance of posttraumatic stress disorder and depression following trauma. *Cognitive Therapy and Research*, 32(4), 488-506. doi: 10.1007/s10608-006-9089-7
- Elkonin, D., & van der Vyver, L. (2011). Positive and negative emotional responses to work-related trauma of intensive care nurses in private health care facilities. *Health SA Gesondheid*, 16(1), 1-8. doi: 10.4102/hsag.v16i1.436
- Elmir, R., Schmied, V., Wilkes, L., & Jackson, D. (2010). Women's perceptions and experiences of a traumatic birth: a meta-ethnography. *Journal of Advanced Nursing*, 66(10), 2142-2153. doi: 10.1111/j.1365-2648.2010.05391.x
- Elwood, L. S., Mott, J., Lohr, J. M., & Galovski, T. E. (2011). Secondary trauma symptoms in clinicians: A critical review of the construct, specificity, and implications for trauma-focused treatment. *Clinical Psychology Review*, 31(1), 25-36. doi: 10.1016/j.cpr.2010.09.004

- Figley, C.R. (1995). Compassion fatigue as secondary traumatic stress disorder: An overview. In C. R. Figley (Ed.), *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized* (1- 20). New York, USA: Routledge.
- Fine, S. B. (1991). Resilience and human adaptability: who rises above adversity? *The American Journal of Occupational Therapy*, 45(6), 493- 503.
- Finlay, L. (2002). "Outing" the researcher: The provenance, process, and practice of reflexivity. *Qualitative Health Research*, 12(4), 531-545. doi: 10.1177/104973202129120052
- Flach, F. F. (1988). *Resilience: discovering new strength at times of stress*. New York, USA: Ballantine Books.
- Foa, E. B., Ehlers, A., Clark, D. M., Tolin, D. F., & Orsillo, S. M. (1999). The Posttraumatic Cognitions Inventory (PTCI): Development and validation. *Psychological Assessment*, 11(3), 303-314. doi: 10.1037/1040-3590.11.3.303
- Foa, E. B., & Kozak, M. J. (1986). Emotional processing of fear: Exposure to corrective information. *Psychological Bulletin*, 99(1), 20- 35.
- Foa, E. B., Cashman, L., Jaycox, L., & Perry, K. (1997). The validation of a self-report measure of posttraumatic stress disorder: the posttraumatic diagnostic scale (PDS). *Psychological Assessment*, 9(4), 445- 451.
- Foa, E. B., & Rothbaum, B. O. (1998). *Treating the trauma of rape: cognitive behavioural therapy for PTSD*. New York: Guildford Press.
- Foa, E. B., Steketee, G., & Rothbaum, B. O. (1989). Behavioural/cognitive conceptualisation of post-traumatic stress disorder. *Behaviour Therapy*, 20, 155- 176.
- Friedman, M. J., Resick, P. A., Bryant, R. A., & Brewin, C. R. (2010). Considering PTSD for DSM-5. *Depression and Anxiety*, 28(9), 750-769.
- Gaal, N. (2010). Comparin burnout levels experienced by therapists working in a mental health organization versus therapists working in private practice. *Journal of Psychological Issues in Organizational Culture*, 1(3), 31- 55.
- Goldblatt, H. (2009). Caring for abused women: impact on nurses' professional and personal life experiences. *Journal of Advanced Nursing*, 65(8), 1645-1654. doi: 10.1111/j.1365-2648.2009.05019.x
- Goldbort, J., Knepp, A., Mueller, C., & Pyron, M. (2011). Intrapartum nurses' lived experience in a traumatic birthing process. *Mcn-the American Journal of Maternal-Child Nursing*, 36(6), 373-380. doi: 10.1097/NMC.0b013e31822de535

- Graham, J. W., Cumsille, P. E., & Elek-Fisk, E. (2003). Methods for handling missing data. In J. A. Schinka, & W. F. Velicer (Eds.), *Comprehensive Handbook of Psychology: Volume 2. Research Methods in Psychology*. New York, USA: Wiley.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 107-117). Thousand Oaks, CA: Sage.
- Halperin, O., Goldblatt, H., Noble, A., Raz, I., Zvulunov, I., & Wischnitzer, M. L. (2011). Stressful Childbirth Situations: A Qualitative Study of Midwives. *Journal of Midwifery & Womens Health*, 56(4), 388-394. doi: 10.1111/j.1542-2011.2011.00030.x
- Halpern, J., Maunder, R. G., Schwartz, B., & Gurevich, M. (2011). Identifying risk of emotional sequelae after critical incidents. *Emergency Medicine Journal*, 28(1), 51-56. doi: 10.1136/emj.2009.082982
- Halpern, J., Maunder, R. G., Schwartz, B., & Gurevich, M. (2012a). Attachment insecurity, responses to critical incident distress, and current emotional symptoms in ambulance workers. *Stress and Health*, 28(1), 51-60.
- Halpern, J., Maunder, R. G., Schwartz, B., & Gurevich, M. (2012b). The critical incident inventory: Characteristics of incidents which affect emergency medical technicians and paramedics. *BMC Emergency Medicine*, 10.
- Health and Social Care Information Centre. (2009). Adult Psychiatric Morbidity in England – 2007, Results of a household survey. Accessed April 2011, retrieved from <http://www.hscic.gov.uk/catalogue/PUB02931>
- Health and Social Care Information Centre. (2013). NHS workforce: Summary of staff in the NHS: Results from September 2012 census. Accessed August 2013, retrieved from <http://www.hscic.gov.uk/catalogue/PUB10392>
- Horowitz, M., Wilner, N., & Alvarez, W. (1979). Impact of event scale- measure of subjective stress. *Psychosomatic Medicine*, 41(3), 209-218.
- Horowitz, M. J. (1986). *Stress response syndromes (2nd Ed)*. Northvale, NJ: Jason Aronson.
- Hochschild, A. R. (1983). *The managed heart: commercialization of human feeling*. Berkeley, CA: University of California Press.
- Hood, L., Fenwick, J., & Butt, J. (2010). A story of scrutiny and fear: Australian midwives' experience of an external review of obstetric services, being involved with litigation and the impact on clinical practice. *Midwifery*, 26(3), 268-285.
- Hunter, B. (2005). Emotion work and boundary maintenance in hospital-based midwifery. *Midwifery*, 21(3), 253-266. doi: 10.1016/j.midw.2004.12.007

- Hunter, B. (2006). The importance of reciprocity in relationships between community-based midwives and mothers. *Midwifery*, 22(4), 308-322. doi: 10.1016/j.midw.2005.11.002
- Iliffe, G., & Steed, L. G. (2000). Exploring the counselor's experience of working with perpetrators and survivors of domestic violence. *Journal of Interpersonal Violence*, 15(393- 412).
- Injeyan, M. C., Shuman, C., Shugar, A., Chitayat, D., Atenafu, E. G., & Kaiser, A. (2011). Personality Traits Associated with Genetic Counselor Compassion Fatigue: The Roles of Dispositional Optimism and Locus of Control. *Journal of Genetic Counseling*, 20(5), 526-540. doi: 10.1007/s10897-011-9379-4
- Jacelon, C. S. (1997). The trait and process of resilience. *Journal of Advanced Nursing*, 25(1), 123-129. doi: 10.1046/j.1365-2648.1997.1997025123.x
- Jackson, D., Firtko, A., & Edenborough, M. (2007). Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: a literature review. *Journal of Advanced Nursing*, 60(1), 1-9. doi: 10.1111/j.1365-2648.2007.04412.x
- Janoffbulman, R. (1989). Assumptive worlds and the stress of traumatic events - Applications of the schema construct *Social Cognition*, 7(2), 113-136. doi: 10.1521/soco.1989.7.2.113
- Janoff-Bulman, R.(1992). *Shattered Assumptions Towards a New Psychology of Trauma*. New York, USA: Free Press.
- Jenkins, S., & Baird, S. (2002). Secondary traumatic stress and vicarious trauma: A validation study. *Journal of Traumatic Stress*, 15(5), 423- 432.
- Joinson, C. (1992). Coping with compassion fatigue. *Nursing*, 22(4), 118-120.
- Jonsson, A., & Segesten, K. (2003). The meaning of traumatic events as described by nurses in ambulance service. *Accident and emergency nursing*, 11(3), 141-152. doi: 10.1016/s0965-2302(02)00217-5
- Jonsson, A., & Segesten, K. (2004a). Daily stress and concept of self in Swedish ambulance personnel. *Prehospital and disaster medicine*, 19(3), 226-234.
- Jonsson, A., & Segesten, K. (2004b). Guilt, shame and need for a container: a study of post-traumatic stress among ambulance personnel. *Accident and emergency nursing*, 12(4), 215-223. doi: 10.1016/j.aaen.2004.05.001
- Joseph, S., & Linley, P. A. (2006). Growth following adversity: Theoretical perspectives and implications for clinical practice. *Clinical Psychology Review*, 26(8), 1041-1053. doi: 10.1016/j.cpr.2005.12.006

- Kaler, M. E., Frazier, P. A., Anders, S. L., Tashiro, T., Tomich, P., Tennen, H., & Park, C. (2008). Assessing the psychometric properties of the world assumptions scale. *Journal of Traumatic Stress, 21*(3), 326-332. doi: 10.1002/jts.20343
- Kerasiotis, B., & Motta, R. W. (2004). Assessment of PTSD symptoms in emergency room, intensive care unit, and general floor nurses. *International journal of emergency mental health, 6*(3), 121-133.
- Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M. & Nelson, C. B. (1995). Posttraumatic stress disorder in the national comorbidity survey. *Archives of General Psychiatry, 52*(12), 1048-1060.
- King, N. (2004). Using templates in the thematic analysis of text. In: Cassel, C., & Symon, G (Eds.), *Essential Guide to Qualitative Methods in Organisational Research* (256-270). London, UK: Sage.
- King, N. (2012). 'Doing template analysis,' In G. Symon, & C. Cassell (Eds.), *Qualitative Organizational Research: Core Methods and Current Challenges* (pp. 427- 450). London, UK: Sage.
- Kirkham, M. (2007). Traumatized midwives. *AIMS Journal 19*(1), 12-13.
- Knezevic, B., Milosevic, M., Golubic, R., Belosevic, L., Russo, A., & Mustajbegovic, J. (2011). Work-related stress and work ability among Croatian university hospital midwives. *Midwifery, 27*(2), 146-153. doi: 10.1016/j.midw.2009.04.002
- Komachi, M. H., Kamibeppu, K., Nishi, D., & Matsuoka, Y. (2012). Secondary traumatic stress and associated factors among Japanese nurses working in hospitals. *International Journal of Nursing Practice, 18*(2), 155-163. doi: 10.1111/j.1440-172X.2012.02014.x
- Krans, J., Naring, G., Holmes, E. A., & Becker, E. S. (2010). "I see what you're saying": Intrusive images from listening to a traumatic verbal report. *Journal of Anxiety Disorders, 24*(1), 134-140. doi: 10.1016/j.janxdis.2009.09.009
- Lang, P. J. (1979). A bio-informational theory of emotional imagery. *Journal of Psychophysiology, 16*, 495- 512.
- Laposa, J. M., & Alden, L. E. (2003). Posttraumatic stress disorder in the emergency room: exploration of a cognitive model. *Behaviour Research and Therapy, 41*(1), 49-65. doi: 10.1016/s0005-7967(01)00123-1
- Lavender, T., & Chapple, J. (2004). An exploration of midwives' views of the current system of maternity care in England. *Midwifery, 20*(4), 324-334. doi: 10.1016/j.midw.2004.01.005

- Lavoie, S., Talbot, L. R., & Mathieu, L. (2011). Post-traumatic stress disorder symptoms among emergency nurses: their perspective and a 'tailor-made' solution. *Journal of Advanced Nursing*, 67(7), 1514-1522. doi: 10.1111/j.1365-2648.2010.05584.x
- Lawrence, E. J., Shaw, P., Baker, D., Baron-Cohen, S., & David, A. S. (2004). Measuring empathy: reliability and validity of the Empathy Quotient. *Psychological Medicine*, 34(5), 911-919. doi: 10.1017/s0033291703001624
- Leinweber, J., & Rowe, H. J. (2010). The costs of 'being with the woman': secondary traumatic stress in midwifery. *Midwifery*, 26(1), 76-87. doi: 10.1016/j.midw.2008.04.003
- Leiter, M. P., & Maslach, C. (2009). Nurse turnover: the mediating role of burnout. *Journal of Nursing Management*, 17(3), 331-339. doi: 10.1111/j.1365-2834.2009.01004.x
- Lindgren, K. P., Kaysen, D., Werntz, A. J., Gasser, M. L., & Teachman, B. A. (2013). Wounds that can't be seen: implicit trauma associations predict posttraumatic stress disorder symptoms. *Journal of Behaviour Therapy and Experimental Psychiatry*, 44, 368- 375. doi:10.1016/j.jbtep.2013.03.003
- Linley, P. A., & Joseph, S. (2004). Positive change following trauma and adversity: A review. *Journal of Traumatic Stress*, 17(1), 11-21. doi: 10.1023/B:JOTS.0000014671.27856.7e
- Lukaschek, K., Baumert, J., Kruse, J., Emeny, R.T., Lacruz, M.E., Huth, C., Thorand, B., Holle, R., Rathmann, W., Meisinger, C., & Ladwig, K.H. (2013). Relationship between posttraumatic stress disorder and type 2 diabetes in a population-based cross-sectional study with 2970 participants. *Journal of Psychosomatic Research*, 74(4), 340- 345. doi: 10.1016/j.jpsychores.2012.12.011
- Mackin, P., & Sinclair, M. (1998). Labour ward midwives' perceptions of stress. *Journal of Advanced Nursing*, 27(5), 986-991. doi: 10.1046/j.1365-2648.1998.00571.x
- Maia, A. C., & Ribeiro, E. (2010). The psychological impact of motor vehicle accidents on emergency service workers. *European Journal of Emergency Medicine*, 17(5), 296-301. doi: 10.1097/MEJ.0b013e3283356213
- Maiden, J., Georges, J. M., & Connelly, C. D. (2011). Moral distress, compassion fatigue, and perceptions about medication errors in certified critical care nurses. *Dimensions of critical care nursing*, 30(6), 339-345. doi: 10.1097/DCC.0b013e31822fab2a
- Malott, A. M., Davis, B. M., McDonald, H., & Hutton, E. (2009). Midwifery care in eight industrialized countries: how does Canadian midwifery compare? *Journal of obstetrics and gynaecology Canada*, 31(10), 974-979.
- Mander, R. (2001). The midwife's ultimate paradox: a UK-based study of the death of a mother. *Midwifery*, 17(4), 248-258. doi: 10.1054/midw.2001.0275

- Mangoulia, P., Fildissis, G., Koukia, E., Alevizopoulos, G., & Katostaras, T. (2010). Secondary traumatic stress among ICU nurses in Greece. *Intensive Care Medicine*, 36, S340-S340.
- Maslach, C., Jackson, S. E., Leiter, M.P., Schaufeli, W. B., & Schwab, R.L. (1996). *MBI: The Maslach Burnout Inventory: Manual*. Palo Alto: Consulting Psychologists Press.
- Maslach, C., Schaufeli, W. B., & Leiter, M. P. (2001). Job burnout. *Annual Review of Psychology*, 52, 397- 422.
- Maxwell, J. S. (2012). *A Realist Approach for Qualitative Research*. George Mason University: USA: Sage.
- Maytum, J. C., Heiman, M. B., & Garwick, A. W. (2004). Compassion fatigue and burnout in nurses who work with children with chronic conditions and their families. *Journal of pediatric health care : official publication of National Association of Pediatric Nurse Associates & Practitioners*, 18(4), 171-179. doi: 10.1016/j.pedhc.2003.12.005
- McCann, I., Pearlman, L. A. (1990). Vicarious traumatization: A framework for understanding the psychological effects of working with victims. *Journal of Traumatic Stress*, 3(1), 131-149.
- McCann, I. L., & Pearlman, L. A. (1992). Constructivist self-development theory: a theoretical framework for assessing and treating traumatized college students. *Journal of American college health*, 40(4), 189-196.
- McGarry, S., Girdler, S., McDonald, A., Valentine, J., Lee, S.L., Blair, E., Wood, F., & Elliott, C. (2013). Paediatric health-care professionals: Relationships between psychological distress, resilience and coping skills. *Journal of Paediatrics and Child Health*, 49(9), 725-732. doi: 10.1111/jpc.12260
- Mealer, M., Burnham, E. L., Goode, C. J., Rothbaum, B., & Moss, M. (2009). The prevalence and impact of posttraumatic stress disorder and burnout in nurses. *Depression and Anxiety*, 26(12), 1118-1126. doi: 10.1002/da.20631
- Mealer, M., Jones, J., Newman, J., McFann, K. K., Rothbaum, B., & Moss, M. (2012). The presence of resilience is associated with a healthier psychological profile in intensive care unit (ICU) nurses: Results of a national survey. *International Journal of Nursing Studies*, 49(3), 292-299. doi: 10.1016/j.ijnurstu.2011.09.015
- Mealer, M. L., Shelton, A., Berg, B., Rothbaum, B., & Moss, M. (2007). Increased prevalence of post-traumatic stress disorder symptoms in critical care nurses. *American Journal of Respiratory and Critical Care Medicine*, 175(7), 693-697. doi: 10.1164/rccm.200606-735OC

- Menage, J. (1993). Womens perception of obstetric and gynecological examination. *British Medical Journal*, 306(6885), 1127-1128.
- Mental Health Foundation. (2007). The Fundamental Facts. The latest facts and figures on mental health. Accessed March 2012, retrieved from http://www.mentalhealth.org.uk/content/assets/PDF/publications/fundamental_facts_2007.pdf?view=Standard
- Michael, T., Halligan, S. L., Clark, D. M., & Ehlers, A. (2007). Rumination in posttraumatic stress disorder. *Depression and Anxiety*, 24(5), 307-317. doi: 10.1002/da.20228
- Mollart, L., Skinner, V. M., Newing, C., & Foureur, M. (2013). Factors that may influence midwives work-related stress and burnout. *Women and Birth*, 26(1), 26-32. doi: 10.1016/j.wombi.2011.08.002
- National Institute for Health and Care Excellence. (2005). Post-traumatic stress disorder (PTSD): The management of PTSD in adults and children in primary and secondary care. Accessed September 2012, retrieved from <http://publications.nice.org.uk/post-traumatic-stress-disorder-ptsd-cg26/about-this-guideline>
- National Institute for Health and Care Excellence. (2008). Antenatal care: routine care for the health pregnant woman. Accessed January 2011, retrieved from <http://www.nice.org.uk/CG62>
- Nursing and Midwifery Council. (2008). Statistical analysis of the register 1 April 2007 to 31 March 2008. Accessed January 2012, retrieved from <http://www.nmc-uk.org/Documents/Statistical%20analysis%20of%20the%20register/NMC-Statistical-analysis-of-the-register-2007-2008.pdf>
- Nursing and Midwifery Council. (2013). Midwives rules and standards. Accessed June 2013, retrieved from <http://www.nmc-uk.org/Publications/Standards/>.
- Nursing and Midwifery Council. (2009). Standards for pre-registration midwifery education. Accessed June 2013, retrieved from http://www.nmc-uk.org/Documents/NMC-Publications/nmcStandardsforPre_RegistrationMidwiferyEducation.pdf
- Nursing and Midwifery Council. (2011). The Prep handbook. Accessed September 2013, retrieved from <http://www.nmc-uk.org/Publications/Standards/>
- Nursing and Midwifery Council. (2011). Supervision, support and safety. NMC quality assurance of the LSAs 2010-2011. Accessed October 2013, retrieved from <http://www.nmc-uk.org/Documents/Midwifery-booklets/NMC-Supervision-support-and-safety-2010-2011.PDF>
- Neal, L. A., Green, G., & Turner, M. A. (2004). Post-traumatic stress and disability. *British Journal of Psychiatry*, 184, 247-250. doi: 10.1192/bjp.184.3.247

- Office for National Statistics (2010) *Births and Deaths in England and Wales, 2010*. Accessed March 2012, retrieved from <http://www.ons.gov.uk/ons/rel/vsob1/birth-summary-tables--england-and-wales/2010/births-and-deaths-in-england-and-wales--2010-statistical-bulletin.pdf>
- Office for National Statistics. (2013). Births in England and Wales, 2012. Accessed August 2013, retrieved from <http://www.ons.gov.uk/ons/rel/vsob1/birth-summary-tables--england-and-wales/2012/stb-births-in-england-and-wales-2012.html>
- Olde, E., van der Hart, O., Kleber, R., & van Son, M. (2006). Posttraumatic stress following childbirth: A review. *Clinical Psychology Review*, 26(1), 1-16. doi: 10.1016/j.cpr.2005.07.002
- Otto, M. W., Henin, A., Hirshfeld-Becker, D. R., Pollack, M. H., Biederman, J., & Rosenbaum, J. F. (2007). Posttraumatic stress disorder symptoms following media exposure to tragic events: Impact of 9/11 on children at risk for anxiety disorders. *Journal of Anxiety Disorders*, 21(7), 888-902. doi: 10.1016/j.janxdis.2006.10.008
- Ozer, E. J., Best, S. R., Lipsey, T. L., & Weiss, D. S. (2003). Predictors of posttraumatic stress disorder and symptoms in adults: A meta-analysis. *Psychological Bulletin*, 129(1), 52-73. doi: 10.1037//0033-2909.129.1.52
- Papageourgiou, C., & Wells, A. (2004). *Depressive rumination: Nature, theory, and treatment*. Chichester, UK: Wiley.
- Park, C. L., Mills, M. S., & Edmonson, D. (2012). PTSD as meaning violation: Testing a cognitive worldview perspective. *Psychological Trauma: Theory Research Practice and Policy*, 4(1), 66- 73.
- Pearlman, L. A. (1996). Psychometric review of TSI Belief Scale, Revision L. In B. H. Stamm (Ed.). *Measurement of Stress, Trauma, and Adaptation* (pp. 419-430). Lutherville, MD: Sidran Press.
- Pearlman, L.A. (2003). *Trauma and attachment belief scale*. Los Angeles CA: Western Psychological Services.
- Pearlman, L., & Saakvitne, K. W. (1995). *Trauma and the therapist: Countertransference and vicarious traumatization in psychotherapy with incest survivors*. New York, USA: Norton and Company.
- Pearlman, L. & Mac Ian, P. S. (1995). Vicarious traumatization: an empirical study of effects of trauma work on trauma therapists *Professional Psychology-Research and Practice*, 26(6), 558-565. doi: 10.1037/0735-7028.26.6.558
- Perry, B. (2010). An exploration of the experience of compassion fatigue in clinical oncology nurses. *European Journal of Oncology Nursing*, 14, S23-S24.

- Polk, L. V. (1997). Toward a middle-range theory of resilience. *Advances in Nursing Science*, 19(3), 1-13.
- Porter, A. J. (2007). Effects of provider position and time worked on compassion satisfaction, burnout, and compassion fatigue/secondary trauma. *Journal of Investigative Medicine*, 55(1), S108-S108.
- Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion Fatigue and Burnout: Prevalence Among Oncology Nurses. *Clinical Journal of Oncology Nursing*, 14(5), 565-565. doi: 10.1188/10.cjon.e56-e62
- Rash, C. J., Coffey, S. F., Baschnagel, J. S., Drobles, D. J., & Saladin, M. E. (2008). Psychometric properties of the IES-R in traumatized substance dependent individuals with and without PTSD. *Addictive Behaviors*, 33(8), 1039-1047. doi: 10.1016/j.addbeh.2008.04.006
- Resnick, H. S., Kilpatrick, D. G., Dansky, B. S., Saunders, B. E. & Best, C. L. (1993). Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *Journal of Consulting and Clinical Psychology*, 61(6), 984-991. doi: 10.1037/0022-006x.61.6.984
- Rice, H., & Warland, J. (2013). Bearing witness: Midwives experiences of witnessing traumatic birth. *Midwifery*, 29(9), 1056-1063. doi: 10.1016/j.midw.2012.12.003
- Royal College of Midwives. (2007). Adverse clinical incidents: Support for midwives. *Midwives*, 10(10), 462- 465. Accessed July 2013, retrieved from <http://www.rcm.org.uk/midwives/features/adverse-clinical-incidents-support-for-midwives/>
- Royal College of Midwives. (2011). State of Maternity Services Report 2011. Accessed July 2013, retrieved from http://www.who.int/workforcealliance/knowledge/resources/RCM_MaternityReport.pdf
- Royal College of Midwives. (2012). State of Maternity Services Report 2012. Accessed August 2013, retrieved from <http://www.rcm.org.uk/college/policy-practice/government-policy/state-of-maternity-services/>
- Ruitenbunrg, M. M., Frings-Dresen, M. H., & Sluiter, J. K. (2012). The prevalence of common mental disorders among hospital physicians and their association with self-reported work ability: A cross-sectional study. *BMC Health Services Research*, 12(1). 292- 299. doi:10.1186/1472-6963-12-292
- Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry*, 57(3), 316-331.

- Sabin-Farrell, R., & Turpin, G. (2003). Vicarious traumatization: implications for the mental health of health workers? *Clinical Psychology Review*, 23(3), 449-480. doi: 10.1016/s0272-7358(03)00030-8
- Seides, R. (2010). Should the current DSM-IV-TR definition for PTSD be expanded to include serial and multiple microtraumas as aetiologies? *Journal of Psychiatric and Mental Health Nursing*, 17(8), 725-731. doi: 10.1111/j.1365-2850.2010.01591.x
- Sinclair, H. A. H., & Hamill, C. (2007). Does vicarious traumatisation affect oncology nurses? A literature review. *European Journal of Oncology Nursing*, 11(4), 348-356. doi: 10.1016/j.ejon.2007.02.007
- Soet, J. E., Brack, G. A., & Dilorio, C. (2003). Prevalence and predictors of women's experience of psychological trauma during childbirth. *Birth-Issues in Perinatal Care*, 30(1), 36-46. doi: 10.1046/j.1523-536X.2003.00215.x
- Sandall, J. (1997). Midwives' burnout and continuity of care. *British Journal of Midwifery*, 5(2), 106-111.
- Sheehan, D. V. (1983). *The Anxiety Disease*. Scribner's: New York.
- Stamm BH (2010) The Concise ProQOL Manual 2nd ed. Pocatello (ID). Accessed January 2012, retrieved from http://www.proqol.org/ProQOL_Test_Manuals.html
- Steed, L. G., & Downing, R. . (1998). A phenomenological study of vicarious traumatisation amongst Psychologists and professional Counsellors working in the field of sexual abuse/ assault. *The Australasian Journal of Disaster and Trauma Studies*, 2.
- Stein, M. B., Walker, J. R., Hazen, A. L., & Forde, D. R. (1997). Full and partial posttraumatic stress disorder: Findings from a community survey. *American Journal of Psychiatry*, 154(8), 1114-1119.
- Surtees, R. (2010). 'Everybody expects the perfect baby...and perfect labour...and so you have to protect yourself': discourses of defence in midwifery practice in Aotearoa/New Zealand. *Nursing inquiry*, 17(1), 82-92. doi: 10.1111/j.1440-1800.2009.00464.x
- Suvak, M., Maguen, S., Litz, B. T., Silver, R. C., & Holman, E. A. (2008). Indirect exposure to the September 11 terrorist attacks: Does symptom structure resemble PTSD? *Journal of Traumatic Stress*, 21(1), 30-39. doi: 10.1002/jts.20289
- Symon, A. (2000). Litigation and changes in professional behaviour: a qualitative appraisal. *Midwifery*, 16(1), 15-21. doi: 10.1054/midw.1999.0193
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using Multivariate Statistics* (5th ed.). USA: Pearson Education.
- Thomas, B. G. (2006). 'Making a difference:' midwives' experiences of caring for women. *Evidence Based Midwifery*, 4(3), 83-88.

- Torraco, R. J. (2005). Writing integrative literature reviews: Guidelines and examples. *Human Resource Development Review*, 4(3), 356- 367. doi: 10.1177/1534484305278283
- Townsend, S. M., & Campbell, R. (2009). Organizational correlates of secondary traumatic stress and burnout among sexual assault nurse examiners. *Journal of forensic nursing*, 5(2), 97-106. doi: 10.1111/j.1939-3938.2009.01040.x
- Udipi, S., Veach, P. M., Kao, J., & LeRoy, B. S. (2008). The psychic costs of empathic engagement: personal and demographic predictors of genetic counselor compassion fatigue. *Journal of genetic counseling*, 17(5), 459-471. doi: 10.1007/s10897-008-9162-3
- van der Ploeg, E., Dorresteyn, S. M., & Kleber, R. J. (2003). Critical incidents and chronic stressors at work: their impact on forensic doctors. *Journal of occupational health psychology*, 8(2), 157-166. doi: 10.1037/1076-8998.8.2.157
- van der Ploeg, E., & Kleber, R. J. (2003). Acute and chronic job stressors among ambulance personnel: Predictors of health symptoms. *Occupational and Environmental Medicine*, 60(Supplement 1), i40-i46. doi: 10.1136/oem.60.suppl_1.i40
- van Minnen, A., & Keijsers, G. P. J. (2000). A controlled study into the (cognitive) effects of exposure treatment on trauma therapists. *Journal of Behavior Therapy and Experimental Psychiatry*, 31(3-4), 189-200. doi: 10.1016/s0005-7916(01)00005-2
- Voges, M. A., & Romney, D. M. (2003). Risk and resiliency factors in posttraumatic stress disorder. *Annals of General Hospital Psychiatry*, 2(1), 4.
- Von Rueden, K. T., Hinderer, K. A., McQuillan, K. A., Murray, M., Logan, T., Kramer, B., . . . Friedmann, E. (2010). Secondary traumatic stress in trauma nurses: prevalence and exposure, coping, and personal/environmental characteristics. *Journal of trauma nursing : the official journal of the Society of Trauma Nurses*, 17(4), 191-200. doi: 10.1097/JTN.0b013e3181ff2607
- Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of nursing measurement*, 1(2), 165-178.
- Wallbank, S. (2010). Effectiveness of individual clinical supervision for midwives and doctors in stress reduction: findings from a pilot study. *Evidence Based Midwifery*, 8(2), 65-70.
- Wallbank, S., & Robertson, N. (2013). Predictors of staff distress in response to professionally experienced miscarriage, stillbirth and neonatal loss: A questionnaire survey. *International Journal of Nursing Studies*, 50(8), 1090-1097. doi: 10.1016/j.ijnurstu.2012.11.022

- Way, I., VanDeusen, K. M., Martin, G., Applegate, B., & Jandle, D. (2004). Vicarious trauma - A comparison of clinicians who treat survivors of sexual abuse and sexual offenders. *Journal of Interpersonal Violence*, 19(1), 49-71. doi: 10.1177/0886260503259050
- Weiss, D., & Marmar, C. (1997). The Impact of Event Scale -Revised. In J. Wilson, T. Keane (Eds.), *Assessing psychological trauma and PTSD* (pp. 399- 411). New York, USA: Guildford.
- Wessley, S., Bryant, R., Greenberg, N., Earnshaw, M., Sharpley, J. & Hughes, J. (2008). Does psychoeducation help prevent posttraumatic psychological stress? *Psychiatry*. 71, 287-307.
- Whittemore, R., & Knafl, K. (2005). The integrative review: updated methodology. *Journal of Advanced Nursing*, 52(5), 546-553. doi: 10.1111/j.1365-2648.2005.03621.x
- Wilson, J. P., & Keane, T. M. (1997). *Assessing Psychological Trauma and PTSD*. New York, USA: Guildford Press.
- Yoder, E. A. (2010). Compassion fatigue in nurses. *Applied Nursing Research*, 23(4), 191-197. doi: 10.1016/j.apnr.2008.09.003
- Young, J. L., Derr, D. M., Cicchillo, V. J., & Bressler, S. (2011). Compassion satisfaction, burnout, and secondary traumatic stress in heart and vascular nurses. *Critical care nursing quarterly*, 34(3), 227-234. doi: 10.1097/CNQ.0b013e31821c67d5
- Zeidenstein, L. (1995). Breaking the silence- finding a voice for loss. *Journal of Nurse-Midwifery*, 40(4), 317-319. doi: 10.1016/0091-2182(95)00019-g
- Zoellner, T., & Maercker, A. (2006). Posttraumatic growth in clinical psychology - A critical review and introduction of a two component model. *Clinical Psychology Review*, 26(5), 626-653. doi: 10.1016/j.cpr.2006.01.008